"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

127-58-6-22/25

AUTHORS: Yushchenko, M.P., Head of Transport Department and Mikhaylov, G.A., Chief Engineer of the Department

TITLE: Use of Heavy Trucks in the Sorskiy Combine (Primeneniye bol'shegruznykh avtomashin na Sorskom kombinate)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 6, pp 76-77 (USSR)

ABSTRACT: The authors describe the use of large dump trucks MAZ-525 for removal work at the Sorskiy Combine. They also describe the organization of a working brigade and its everyday routine. Though the work of the trucks is quite satisfactory, the authors complain of many constructive and technological defects in the trucks themselves. The chassis, axles and other parts are often broken because of the use of low graded steel in their construction. Many other parts are also badly adjusted.

AVAILABLE: Library of Congress

Card 1/1 1. Trucks-Maintenance 2. Earth moving equipment

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

25(5) SOV/28-59-2-8/26

AUTHOR: Mikhaylov, G.A., Engineer

TITLE: Strength Testing of Nut Wrenches (Ispytaniye gayechnykh klyuchey na proochnost' materiala)

PERIODICAL: Standartizatsiya, 1959, Nr 2, pp 30-32 (USSR)

ABSTRACT: Strength testing of nut wrenches by the "GOST 2838-54" method does not guarantee their high quality. The author proposes a new testing method which differs from the first method in the increased values of loading time and loading intermittance. Wrenches manufactured by the Vinnitskiy instrumental'nyy zavod (Vinnitsa Tool Manufacturing Plant), the Kazanskiy zavod po proizvodstvu garazhnogo oborudovaniya (Kazan' Garage Equipment Plant) and the Sestroretsk Plant "Krasnyy Metallist", have been tested by both methods. All the wrenches passed the tests prescribed by the GOST 2838-54, whereas wrenches manufactured at the Sestroretsk Plant broke when tested by the author's method. On an average, the intermittent loadings proposed by the author were 30% higher than those prescribed by the GOST.

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.A., dotsent (Leningrad, prospekt Maysrova, '5, kv. 37)

Surgical anatomy of the intraorganic section of the le accessory hepatic artery. Vest. khir. 92 no.1:21-2t Ja '64. (MIRA 17:11)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav.-prof. M.A. Sreseli) 1-go Leningradskogo meditsinskogo instituta imeni Pavlova.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.A. (Vyksa, Arzamasskaya oblast')

Device for the "sectioning of a cube." Mat. v shkole no.6:25-26 N-D '54. (MLRA 7:11)
(Geometry) (Cube)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

МИХАЙЛОВ, Г. А.

AUTHOR: Mikhaylov,G.A. (Moscow) 103-12-4/12

TITLE: Analysis of the Structure of Series Electronic Digital Computers (Analiz blok-skhem tsifrovykh elektronnykh mashin posledovatel'nogo deystviya)

PERIODICAL: Avtomatika i Telemekhanika, 1957, Vol. 18, Nr 12, pp. 1109-1119 (USSR)

ABSTRACT: In this paper, an analysis of the working-time efficiency and of the structure elements in "series electronic digital computers" is given. The influence of the structure of the basic installations of the machine and of the type of problems, which are to solved by it, on the velocity of computation and other characteristics of the machine are investigated. A comparison is made of the one - two - and three - adress systems for the codification of orders. It is shown, that the operation process of a series computer with a memory on the "residence - lines" is characterized by the coefficient of time efficiency η_c, which does not amount to more than 30-40 %. Therefore, effective measures must be taken to increase the velocity of the execution of orders,

Card 1/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

which augment the coefficient of time efficiency at the expense of a reduction of the expectation time. It is shown, that the technical efficiency of the series computer is characterized by the coefficient of the exploitation of structure elements, denoted by Φ. With the help of this coefficient the advantages of the variants of the structure and the suitableness of the improvements, which were introduced, can be judged. It is further shown, that the velocity of the execution of orders and therefore the velocity of computation of the series computer is strongly dependent on the basic characteristics of the memory for the degree τ of the great cycle. If the volume of the memory is given, there exists an optimum value for the degree of the great circle at given actual structure scheme and basic installations of the computer. This value ensuree the maximum efficiency of the utilization of the structure elements. It is shown, that it is suitable to apply a three stroke - two adress system in computers, which execute numerical operations without taking the order of magnitude into consideration (with a fixed colon). This ensures a higher velocity of

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. A.,

"Digital Electronic Computer TsEM-1," Problems of Cybernetics, No 1, Moscow, p 190. Fizmatgiz, 1958. 268 pp. with SHCHITIKOV, B. N., and YAVLINSKIY, N. A.,

This collection of articles deals with general problems of cybernetics, information theory, theory of algorithms and automatic machines, theory of control systems, theory of games and tactics, methods of operations analysis, problems in the theory of calculating machines, programming, and the application of cybernetics to other sciences, such as biology, economics and linguistics. "Problems of Cybernetics," as a recurrent publication, will continue to include original papers, survey articles and translations and, like the present work, will contain the results of seminars in cybernetics held at Moscow University.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. A., Cand Tech Sci -- (diss) "Study of ~~Numbered~~ Digital Electronic Machine of ~~Consecutive~~ sequential Action." Mos, 1958. 15 pp (Min Higher Ed USSR. Mos Order of Lenin and Order of Labor Red Banner Higher Tech School im Bauman). 150 copies. Bibliography: ~~on pages~~ 14 ~~and~~ 15 (18 titles). (KL 40-58, 114)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.A., otv. red.; OSTAPENKO, V.N., otv. red.; MEL'NIK, T.S., red.; LISOVETS, A.M., tekhn. red.

[Computer mathematics and engineering]Vychislitel'naia matematika i mekhanika; trudy aspirantov Instituta kibernetiki AN USSR, Kiev, Izd-vo Akad. nauk USSR, 1962. 177 p. (MIRA 16:4)

1. Akademiya nauk URSR. Kiev. Institut kibernetiki.
(Electronic computers)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

ARTEMENKO, G.A. [Artemenko, H.A.]; VOYTOVICH, I.D. [Voitovych, I.D.]; MIKHAYLOV, G.A. [Mykhailov, H.O.]

Static characteristics of film cryotrons. Ukr. fiz. zhur. 8 no.7:798-800 Jl '63. (MIRA 16:8)

1. Institut kibernetiki AN UkrSSR, Kiyev.
(Electric apparatus and appliances)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.A., dotsent

Anatomic substantiations of expedient incisions for draining the talocrural joint. Vest. khir. 93 no.11:73-78 N '64. (MIRA 18:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - prof. M.A. Sreseli) 1-go Leningradskogo meditsinskogo instituta imeni Pavlova.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.K.; BEL'TYUKOV, G.V.

Works of G.A. Maksimovich on speleology. Peshchery no.4:113-117 '64. (MIRA 18:5)

1. Permskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L [illegible]-65 EED-2/EEC(k)-2/EWT(d)/EWP(1) Pg-4/Pk-4/Pq-4 IJP(c)

ACCESSION NR: AT5011636 UR/0000/64/000/000/0631/0635

AUTHOR: [illegible]; Bekh, A. D.; Voytovich, I. D.; Zykov, F. N.; Pristupa, I. Ya.; Mikhaylov, G. A.

TITLE: Ferrite memories of the UMShN machines

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki. Lvov, 1962. Magnitnyye elementy avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki (Magnetic elements of automatic control, remote control, measurement and computer engineering); trudy soveshchaniya, Kiev, Naukova dumka, 1964, 631-635

TOPIC TAGS: ferrite memory, address shaper, key element, recording shaper, address network

ABSTRACT: This purely descriptive article presents circuit diagrams, block diagrams, technological characteristics, and construction details of the operative ferrite memory and control circuitry (including the address shaper, the key element, the recording shaper, and the address network). Orig. art. has: 9 figures and 1 table.

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 45716-65 EWT(d)/EWT(l)/EEC(k)-2/T/EED-2/EWP(l)/EWA(h) Pz-6/Pq-4/Pg-4/
Peb/Pk-4 IJP(c) BB/GG/GS/AT

ACCESSION NR: AT5011637 UR/0000/64/000/000/0636/0642

AUTHOR: Babenko, N. K.; Bekh, A. D.; Zykov, F. N.; Mikhaylov, G. A. 42 B+1

TITLE: A high-speed memory with semiconductor control 160 21

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki. Lvov, 1962. Magnitnyye elementy avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki (Magnetic elements of automatic control, remote control, measurement and computer engineering); trudy soveshchaniya. Kiev, Naukova dumka, 1964, 636-642

TOPIC TAGS: fast memory, semiconductor controlled memory, recovery time, registration time, decoding time

ABSTRACT: The operation of memories is usually characterized by the reversal time, consisting of three components: the time of reception and decoding of the address, the retrieval time, and the regeneration time. The first and last mentioned components, taken together, are tens of times longer than the time needed for the switching of ferrites. Consequently, further increases in the speed of ferrite memories may be achieved by a better equalization of the magnitudes of the three

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 45716-65

ACCESSION NR: AT5011637

C

above-mentioned time components. The article discusses at length possible ways to reduce the operating time intervals (use of one core per binary unit, recording without compensating cores, pulsed address code, forced cooling, etc.) and presents an economical, reasonably fast memory with 1024 x 26 binary units. The construction and operation of the ferrite cube, address decoder, address network, address shaper, recording shaper, and the reading amplifier are given in considerable detail. Orig. art. has: 10 figures and 1 formula.

ASSOCIATION: None

SUBMITTED: 29Sep64 ENCL: 00 SUB CODE: DP, EC

NO REF SOV: 001 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.A., dotsent

Surgical anatomy of the intrahepatic bile ducts. Vest. khir. no. 6:60-66 '65. (MIRA 18:12)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - prof. M.A.Sreseli) 1-go Leningradskogo meditsinskogo instituta imeni Pavlova.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 8310-66 EWT(d)/T/EWP(1) IJP(c)

ACC NR: AP5028009 SOURCE CODE: UR/0052/65/010/004/0749/0751

38
35
03

AUTHOR: Mikhaylov, G.A.

ORG: None

TITLE: Modeling random variables for one class of distributions

SOURCE: Teoriya veroyatnostey i yeye primeneniya, v. 10, no. 4, 1965, 749-751

TOPIC TAGS: distribution function, mathematic model, random process

ABSTRACT: In calculations employing the method of chance (the Monte-Carlo method) it is necessary to model random variables with prescribed distribution. For this purpose, frequent use is made of transformations of one or several independent random variables, each of which is uniformly distributed in the interval [0.1]. The author designates these random variables as α with different subscripts, and notes that the random variable

$$\xi = F^{-1}(\alpha) \qquad (1)$$

has the F(x) distribution function. In the event the function $F^{-1}(\alpha)$ is not expressed by elementary quantities the modeling by means of formula (1) may prove to be extremely difficult. In

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 8310-66

ACC NR: AP5028009

3

that case, however, there may be a formula

$$\xi = g(\alpha_1, \alpha_2, \ldots, \alpha_k). \qquad (2)$$

which is convenient for mathematical modeling. The present article proves a theorem which may be applied in the search for convenient formulas of the type (2) for one class of distributions. Author expresses his deep gratitude to N.N. Chentsov for valuable remarks in the discussion of this work. Orig. art. has: 4 formulas.

44 55

SUB CODE: MA / SUBM DATE: 22Feb65 / OTH REF: 002

PC

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 23719-66 EWT(d)/T LJP(c)

ACC NR: AP6005008 SOURCE CODE: UR/0208/66/006/001/0071/0080

AUTHOR: Mikhaylov, G. A.

ORG: none

TITLE: Computations of critical systems by the Monte Carlo method

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 1, 1966, 71-80

TOPIC TAGS: Markov process, Monte Carlo method, fission, fission neutron, neutron reaction, neutron counter, nuclear reactor

ABSTRACT: Calculations of critical parameters of nuclear reactors usually lead to computing the value k_{eff} - the coefficient of fission of neutrons on a single generation. In this article various aspects of calculations of k_{eff} by the Monte Carlo method are studied. The proposed technique of computing is termed the method of generations with a constant number of points. This technique is based on the fact that a constant quantity of division points in generations can be retained with the aid of a special algorithm. The chain of fission thus can be viewed as a uniform Markov chain defined in a special finite-dimensional space. The Markov-chain approach provides convenient properties for computer solutions of k_{eff}. The author presents the formulation of the computational method wherein k_{eff} is given as the quantity

Card 1/2 UDC: 518

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 23719-66

ACC NR: AP6005008

$$k_{opt} \approx k_n^{M,N} = \frac{\sum_{i=M}^{N} k_n x_i}{N-M+1}$$

in which $0 \leq M \leq N$. The basis of probabilistic convergence of the Markov chain is proved, as is the convergence

$$\lim_{n\to\infty} k_n = 1.$$

An analysis of the mean square error of the proposed method is also given. The author expresses gratitude to E. S. Kuropatenko, N. N. Nevskaya, V. N. Ogibin, N. A. Pavlova, A. F. Sisovaya, A. B. Govorkov, and A. A. Bunatyan for their help and advice. Orig. art. has: 12 equations and 2 tables.

SUB CODE: 20,12/ SUBM DATE: 24Feb65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 4[illegible]

ACC NR: AP6011363 SOURCE CODE: UR/0208/66/006/002/0380/0384

AUTHOR: Mikhaylov, G. A. (Chelyabinsk)

ORG: none

TITLE: Perturbation estimates for nuclear reactors by the Monte Carlo method

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 2, 1966, 380-384

TOPIC TAGS: nuclear reactor, perturbation, Monte Carlo method

ABSTRACT: The Monte Carlo method is used to apply the general formula for small perturbations (cf. L. N. Vsachev in *Reaktoroutroyeniye i teoriya reaktorov*, M., Izd-vo AN SSSR, 1955, 251-265.) to the problem of obtaining perturbation estimates for nuclear reactors. The necessary value function of the neutrons $f^*(x)$ is defined in phase space X with coordinates x and velocity v and satisfies the relation

$$kf^* = N^*f^*,$$

where k is the effective coefficient of propagation of the reactor, N is the neutron propagation operator for one generation. The quantities δk for a small perturbation in the reactor are computed by the Monte Carlo method. Orig. art. has: 20 formulas.

SUB CODE: 12/18/ SUBM DATE: 23Apr65/ ORIG REF: 003

UDC: 518:517.9:621.039

Card 1/1 MLP

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

ACC NR: AP6022043 SOURCE CODE: UR/0120/66/000/003/0227/0228

AUTHOR: Artemenko, I. A.; Mikhaylov, G. A.; Voytovich, I. D.

ORG: Cybernetics Institute, AN UkrSSR, Kiev (Institut kibernetiki AN UkrSSR)

TITLE: A direct method of determining the phase characteristics of cryotrons

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1966, 227-228

TOPIC TAGS: cryogenic electronics, cryogenic storage, cryogenic device

ABSTRACT: A direct method for determining the transfer characteristics and, therefore, the amplification factor of cryotrons is described. The method uses a memory cell consisting of two cryotrons: an indicating cryotron and the cryotron under study. The transfer characteristics are recorded for constant resistance values of the cryotron filter so that differences between experimentally measured and actual values of threshold currents do not depend on the grid current. Cryotron amplification factors of 1.6 and 2.2 were experimentally found. These values of cryotron amplification factors were used to choose the minimum relationship between widths of the filter and the grid in order to decrease the operation time of the cryotron. All the measurements in liquid helium were conducted at the Khar'kov Physics Engineering Institute (Khar'kovskiy fiziko-tekhnicheskiy institut) jointly with Ya. S. Kan. Orig. art. has: 2 figures.

SUB CODE: 09,20 SUBM DATE: 21Apr65/ ORIG REF: 002/ OTH REF: 001

Card 1/1 UDC: 621.374.328.537.312.62:536.5

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAILOV, G. P., Engineer

"[illegible]," [illegible], Moscow Order of Lenin Aviation Institute imeni S. Ordzhonikidze, [illegible].

Summary [illegible], Dissertations Presented for Degrees in Science and Engineering in Moscow in 1957, From Vechernyaya Moskva, Jan-Dec 1957.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

USSR/Physics - Ultrasonics in Fluids 1 Apr 53

MIKHAYLOV, G.D.

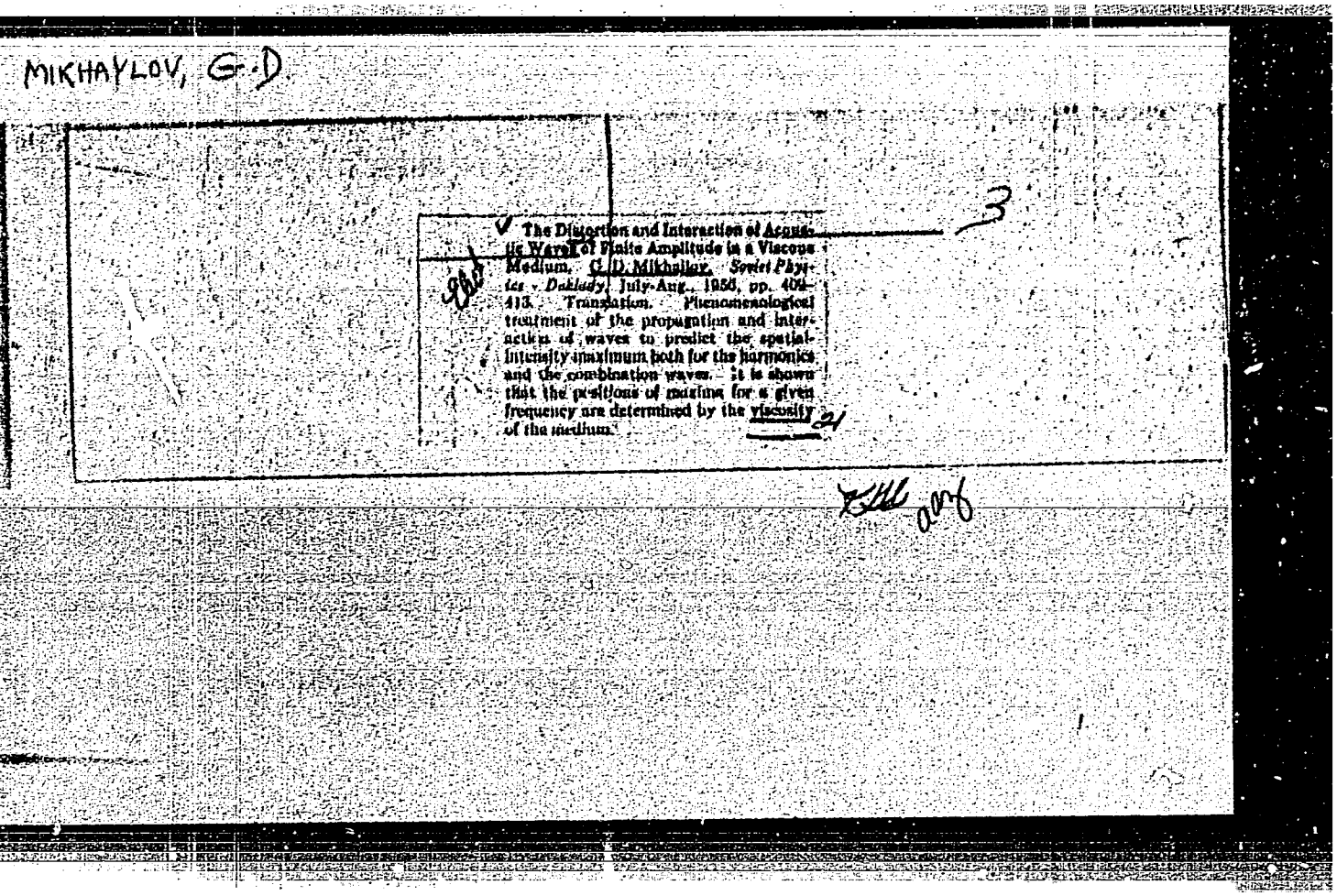
"Interaction of Ultrasonic Waves in Fluids," G. D. Mikhailov, Moscow ~~Regional~~ Oblast Pedagogical Inst.

DAN SSSR, Vol 89, No 4, pp 663-664

Describes equipment in which he succeeded in detecting interaction of two traveling waves, as confirmed by the presence of sums and differences of initial frequencies. Indebtedness to Prof. S. E. Khaykin. Presented by Acad M. A. Leontovich.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



MIKHAYLOV, G.D.

3

The Distortion and Interaction of Acoustic Waves of Finite Amplitude in a Viscous Medium. G. D. Mikhaylov. *Soviet Physics - Doklady*, July-Aug., 1956, pp. 404-413. Translation. Phenomenological treatment of the propagation and interaction of waves to predict the spatial-intensity maximum both for the harmonics and the combination waves. It is shown that the positions of maxima for a given frequency are determined by the viscosity of the medium.

21

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. D.

J-4

Category : USSR/Acoustics - Ultrasound

Abs Jour : Ref Zhur - Fizika No 2, 1957, No 4734

Author : Mikhaylov, G D.; Tikhonova, A V; Yakovlev, I M
Inst : Moscow Oblast Pedagogic Institute, Moscow, USSR
Title : Simultaneous Excitation of Quartz Radiator at Several Frequencies

Orig Pub : Akust zh 1956, 2, No 2, [illegible]

Abstract : Description of a method for exciting a quartz radiator at several frequencies. The radiator is fed by several oscillators. For this purpose one electrode of the radiator is made the common (zero) terminal for the oscillators and the second electrode is divided into sectors, insulated from each other. The power from a corresponding oscillator is connected to each sector. Experimental verification of theis method was carried out with the aid of a plate 20 mm in diameter and 3 mm thick, which was excited at 1 mc. One electrode was common, and the other consisted of two equal semicircles separated by a gap of 1 mm and fed from two oscillators. It was observed that the entire surface of the plate radiates waves when voltage is applied either to one sector or to both sectors. When voltage is applied to one

Card : 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

Category : USSR/Acoustics - Ultrasound J-4

Abs Jour : Ref Zhur - Fizika, No 2 1957 No 4734

only, the intensity of the waves becomes weaker The experiments were carried out in liquid

Card : 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.D.

1121. ON THE QUESTION OF INTERACTION OF ULTRA-SONIC WAVES IN FLUIDS. G.D. Mikhailov. Zh. Eksper. teor. Fiz., Vol. 30, No. 6, 1142 (1956). In Russian.

534.213

A quartz crystal plate 20 mm dia. radiates into vaseline oil. Each half of its area is excited at a different frequency. The receiver is a barium titanate disc. When the driving frequencies are 1.0 and 1.5 Mc/s an output is observed at 2.5 Mc/s. The variation in the magnitude of this output is plotted against distance from the source for two radiated intensities which are in the ratio 2 : 1. It is concluded that there is a marked maximum in the intensity of the combination wave at a certain distance from the source, that the position of this maximum is independent of radiated intensity and that the position is probably a measure of the viscosity of the fluid.

S.C. Dunn

Moscow Oblast Pedagogical Inst.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. D.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1244
AUTHOR MICHAILOV, G.D.
TITLE The Distortion and the Interaction of Acoustic Waves with Finite Amplitude in a Viscous Medium.
PERIODICAL DOkl. Akad. Nauk, 109, fasc. 1, 68-71 (1956)
Publ. 7 / 1956 reviewed 9 / 1956

At first the equations of motion, the continuity equation, and the equation of state (the latter in isentropic form) are given. For the determination of the equations of acoustics in 1. and 2. approximation it is best to develop in series according to a small parameter. The equations of acoustics in 1. and 2. approximation are written down, transformed, and specialized for viscous liquids.
The sound pressure remains now to be found for the following cases in second approximation, i.e. if in a viscous medium a harmonic sound source with a frequency ω_1 or with two frequencies ω_1 and ω_2 respectively is excited in the origin of coordinates. The solutions are in both cases determined step by step, and the expressions for excess pressure in the propagated waves are given. The pressure amplitude in second approximation has a spatial maximum.
Conclusions: If propagation and interaction of waves is studied phenomenologically a spatial intensity maximum for the harmonics and for the combination waves may be predicted.
The position of the maxima is essentially determined by the viscosity of the medium if the frequency is assumed.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

46-4-16/17

AUTHOR: [redacted], Ye.D.

TITLE: [illegible] amplitudnoy [illegible] volnakh)

PERIODICAL: Akusticheskiy Zhurnal, 1957, Vol.III, Nr 4, [illegible]

ABSTRACT: [illegible] r (Ref.4) [illegible] preserve waves of finite amplitude [illegible] ium. In the present paper an attempt is made to [illegible] ment to the case of a bounded [illegible] is considered. Between two [illegible] apart, there is a [illegible] from the [illegible] sources of [illegible] other [illegible] serves as a reflecting [illegible] ([illegible] = r) . The problem consists in [illegible] secondary [illegible] the pressure for combinational [illegible] [illegible] which [illegible] this [illegible] [illegible] given in Ref.4. Using the [illegible] Ref.4 [illegible] the amplitude of the [illegible] of [illegible] [illegible] may [illegible]

Card 1/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

46-4-16/17

The Effect of Amplitude Modulation in Acoustic Double-Slit Waves.

the wave ($\alpha_1 = \infty$; $\alpha_2 \neq \infty$) is modulated in amplitude with the difference frequency. On the other hand, in the sum waves ($\alpha_1 = 0$; $\alpha_2 = 0$) this amplitude is modulated with the sum of the two frequencies. These relations were verified by an experiment with waves in a vacuum. The waves were sent out by a quartz oscillator operating at two frequencies (1 Mc/s and 1.5 Mc/s). Using a receiver tuned to frequencies equal to the sum and difference of these two frequencies were separated out and shown on the screen. The displacement of the quartz receiver was related to the motion of the photographic film moving in front of the slit so that oscillograms of the standing waves were obtained. Results of the experiments agree well with the theory. The final oscillograms show the distribution of waves.

Card 2/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

46-4-16/17

[illegible] of Amplitude Modulation in Acoustic [illegible]
M V [illegible].

ASSOCIATION: Moscow District Pedagogical Institute (Mosk. oblastnoy pedagogicheskiy institut)

SUBMITTED: April 2, 1957.

AVAILABLE: Library of Congress.

Card 3/3 1. Acoustic waves-Amplitude modulation-Theory

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

B/170/60/003/011/009/[illegible]
B019/B056

24 1200

AUTHOR: Mikhaylov, G. D

TITLE: The Conditions for the Existence of Acoustic Waves With Finite Amplitude in a Dissipative Medium

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No 11, pp. 77-82

TEXT: By using the method developed by Riemann the author integrates the complex equations of hydrodynamics and finds the solutions for velocity, pressure, and density. In order to separate the real components from these complex quantities these solutions are developed in power series. In this, the author confines himself to the first terms of these series and assumes that these products are complex quantities. However, the real component of the product is not equal to the product of the real component of the factors, and only if the coefficients of the imaginary components are sufficiently small can the absolute value of the complex quantity be determined from the real component. In this case, the complex quantity is considered to be "quasi real", and it is possible, e.g., by proceeding from the complex solution for pressure to determine the

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

The Conditions for the Existence of Acoustic Waves With Finite Amplitude in a Dissipative Medium

3/170/60/003/011/005/018
B019/B056

varying pressure from the real component of the complex solution Under these conditions three kinds of waves are investigated waves with infinitely small amplitude, weak waves with a finite amplitude and waves with finite amplitude. The corresponding solutions are found and the conditions for their existence are investigated. Analysis of the results obtained shows an asymmetry of amplitudes, the occurrence of pressure maxima as soon as the distance from the emitter changes etc There are 3 references: 2 Soviet and 1 US

ASSOCIATION Institut narodnogo khozyaystva im G V Plekhanova g Moskva
(Institute of Economics imeni G V. Plekhanov Moscow)

SUBMITTED May 16 1960

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

S/191/60/000/006/004/015
B004/B054

5.3830A

AUTHORS: Goncharov, G. S., Levin, A. N., Mikhaylov, G. D., Repkin, Yu. A., Shushpanov, P. I.

TITLE: Influence of Ultrasonics on the Polymerization of Styrene in Aqueous Emulsion

PERIODICAL: Plasticheskiye massy, 1960, No. 6, pp. 8 - 10

TEXT: The authors report on experiments of accelerating the polymerization by means of ultrasonics of varying frequency. The polymerization degree was measured dilatometrically during the experiments by an apparatus which is schematically shown in Fig. 1. Ultrasonic irradiation was carried out at 28 kc/sec (intensity 3 w/cm^2), 825 kc/sec (2 w/cm^2), or 1600 kc/sec (0.3 w/cm^2). The characteristic values of the ultrasonic apparatus are given in a table. The temperature of the dilatometer was kept at 60±0.5°C. The emulsion formula was: 65 g of styrene, 1.3 g of potassium ricinoleate, 130 ml of distilled water. $K_2S_2O_8$ was used as initiator.

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

83412

Influence of Ultrasonics on the Polymerization of Styrene in Aqueous Emulsion

S/191/60/000/006/004/015
B004/B054

No polymerization occurred in ultrasonic irradiation without initiator. An addition of 1% of $K_2S_2O_8$ effected a faster polymerization after 30 min of ultrasonic irradiation than without such irradiation (Fig. 2). The ultrasonic effect became mainly evident in a reduction of the inhibition period at the beginning of the process. Prolonged ultrasonic irradiation changes the course of the process only slightly (Fig. 3). Varying the $K_2S_2O_8$ addition between 0.25 and 1% effected that ultrasonics always exerted an accelerating action, and that the extent of this action became relatively larger with smaller additions of initiator (Fig. 4). Further, the authors studied the influence of ultrasonics on the degasification of water. The results (Fig. 5) led to the conclusion that the ultrasonic effect is partly due to the removal of the inhibiting oxygen dissolved in water. Under the influence of ultrasonics, the authors observed a slow decomposition of the $K_2S_2O_8$ (Fig. 6) which is, however, simulated by the formation of peroxides. These peroxides may also contribute to an accelerated polymerization. There are 6 figures, 1 table, and 5 references: 2 Soviet, 1 US, and 2 German.

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

S/191/60/000/007/004/015
B004/B056

15.8104

AUTHORS: Goncharov, G. S., Levin, A. N., Mikhaylov, G. D., Repkin, Yu. A., Shushpanov, P. I.

TITLE: Polymerization by the Action of Ultrasonics on Aqueous Emulsions of Styrene Containing Polystyrene

PERIODICAL: Plasticheskiye massy, 1960, No. 7, pp. 15 - 16

TEXT: The authors give a report on the polymerization of aqueous styrene emulsions carried out by means of an ultrasonic generator at 28 kc/sec (3 w/cm^2), 825 kc/sec (2 w/cm^2), and 1600 kc/sec (0.3 w/cm^3). The polymerization kinetics was dilatometrically determined. Control experiments (Table) showed that 1) ultrasonic irradiation of styrene emulsions without polystyrene and initiators does not lead to polymerization; 2) an emulsion containing 0.5% of polystyrene dissolved in styrene did not polymerize without ultrasonic irradiation. As soon as this emulsion was, however, acoustically irradiated, polymerization set in (Fig. 1):

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

Polymerization by the Action of Ultrasonics on Aqueous Emulsions of Styrene Containing Polystyrene

S/191/60/000/007/004/015
B004/B056

This confirms the mechano-chemical character of this process. Addition of potassium persulfate as initiator to the styrene-polystyrene system decreased the polymerization rate (Fig. 2). The authors mention a paper by A. A. Berlin and B. S. El'tsefon. There are 2 figures, 1 table, and 1 Soviet reference.

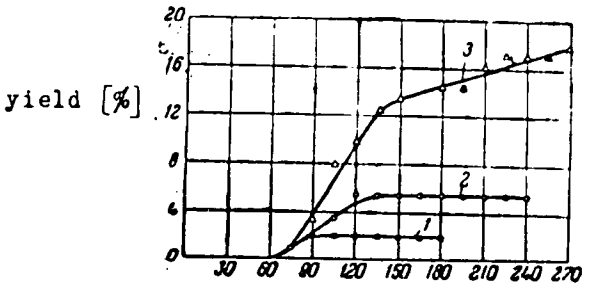


Fig. 1. Effect of ultrasonics upon the styrene-polystyrene system (1 - 825 kc/sec; 2 - 1600 kc/sec; 3 - 28 kc/sec)

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.D.

Conditions for existence of acoustic waves of finite amplitude in a dissipation medium. Inzh.-fiz.zhur. no.11:77-82 N '60. (MIRA 13:11)

1. Institut narodnogo khozyaystva im. G.V.Plekhanova, Moskva.
(Sound waves)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

S/170/61/004/003/011/013
B117/B209

9.9000 (also 1127, 1103)

AUTHOR: Mikhaylov, G. D.

TITLE: Conditions for the existence of weak waves of finite amplitude in dissipative media

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 3, 1961, 113-115

TEXT: The author discusses the analysis of weak waves. He derives a formula for the shift velocity:

$$u = -Ae^{-\alpha x}\left\{\cos\varphi_0 + \sum_{n=1}^{\infty}\frac{(-1)^n\left|B_0 x e^{-\alpha x}\right|^{2n-1}}{(2n-1)!}\sin 2n\varphi_0 + \sum_{n=1}^{\infty}\frac{(-1)^n\left|B_0 x e^{-\alpha x}\right|^{2n}}{(2n)}\cos(2n+1)\varphi_0\right\}. \quad (3)$$

where $A = A_0 e^2$; $\varphi_0 = \omega\left[t - (x/C_0)\right]$; $B_0 = (\quad + 1)A_0^2/2C_0^2$. This formula represents a fundamental wave of an infinitely small amplitude and the sum

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

Conditions for the ...

of an infinite number of even and odd harmonics. From formula (3), the wave equation of any harmonic may be derived. It also shows that the formulas for the harmonics exhibit maxima. The co-ordinates of these maxima are the following: $x_1 = 0$; $x_2 = 1/2\alpha$; $x_3 = 2/3\alpha$; $x_4 = 3/4\alpha$; .....; $x_n = (n-1)/n\alpha$. $x_n \longrightarrow 1/\alpha$ for $n \longrightarrow \infty$. Thus, one may write: (4) $1/2\alpha \leq x_n < 1/\alpha$, $n \geq 2$. This shows that a weak wave of finite amplitude has an infinite number of peaks within the range of (4). The author compares the formula (3) derived for a weak wave of finite amplitude with that derived with the aid of the perturbation theory, and he shows that formula (3) has a more general practical validity. There are 2 Soviet-bloc references.

ASSOCIATION: Institut narodnogo khozyaystva im. G. V. Plekhanova, g. Moskva (Institute of National Economy imeni G. V. Plekhanov, Moscow)

SUBMITTED: September 24, 1960

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

30466

S/139/61/000/005/002/014
E032/E514

24,1200 (1109, 1144, 1147, 1327)

AUTHOR Mikhaylov G D

TITLE On the dynamics of acoustic waves of finite amplitude in a dissipative medium

PERIODICAL Izvestiya vysshikh uchebnykh zavedeniy Fizika, no 5 1961 15-23

TEXT: The author seeks the solution of the hydrodynamic equations

$$\frac{\partial \rho}{\partial t} + u\frac{\partial \rho}{\partial x} + \rho\frac{\partial u}{\partial x}$$

$$\frac{\partial u}{\partial t} + u\frac{\partial u}{\partial x} + \frac{1}{\rho}\frac{\partial p}{\partial x} + \nu_0(\rho/\rho_0)u$$

where $\rho = \rho_1 + i\rho_2$ $p = p_1 + ip_2$ $x = x_1 + ix_2$ $\check{\rho}_0 = \rho_0 + i\rho'_1$

$u = u_1 + iu_2$ $\check{p}_0 = p_0 + ip_0$ $t = t_1 + it_2$ $\check{\gamma} = \gamma_1 + i\gamma_2$

The equations are solved approximately by Rieman s method In

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

essence the method consists in the linearization of the solution rather than the original differential equations Once the linearized solution has been found the next approximation is determined by iteration The unknown parameters which enter into the solution are then determined from the initial and boundary conditions Depending on the magnitude of the amplitude the solutions are shown to be classifiable into three types of acoustic waves and quantitative criteria are derived for distinguishing between them Analysis of the solution obtained shows that the local magnitude of the amplitude increases with distance from the emitter and passes through a maximum It is stated that the method requires mathematical justification and that the results obtained for finite amplitude waves are more general than those reported in the literature There are 4 references: 3 Soviet (2 translations - one from Italian and one from German) and 1 non-Soviet The English-language reference reads as follows: Ref 3 J J Markham R J Beyer and R B Lindsay Rev Mod Phys 23,353 1951.

ASSOCIATION Institut narodnogo khozyaystva imeni G V Plekhanova
(Institute of National Economy imeni G.V Plekhanov)

SUBMITTED June 20 1960

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

SHUSHPANOV, P.I.; KOKOREV, D.T.; MIKHAYLOV, G.D.; KLYUCHAREV, A.Ye.

Ultrasonic apparatus for the emulsification of liquid mixtures.
Prim. ul'traakust. k issl. veshch. no.15:219-224 '61.
(MIRA 16:8)

(Emulsions) (Ultrasonic waves)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

BABYUK, A.G.; MIKHAYLOV, G.D.; SHUPSHPANOV, P.I., red.; SERGEYEVA, A.S., tekhn. red.

[Using ultrasonic techniques for the formation of emulsions; practical work in physics]Poluchenie emul'sii pri pomoshchi ul'trazvuka; praktikum po fizike. Pod red. Shushpanova, P.I. Moskva, No.28. 1962. 17 p. (MIRA 16:3)

1. Moscow. Institut narodnogo khozyaystva.
(Ultrasonic waves—Industrial applications) (Emulsions)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, Georgiy

Canned sun. Znan. sila 38 no.9:24-25 S '63. (MIRA 16:12)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

KOPEYKIN, V.P., inzh.; MIKHAYLOV, G.D., inzh.

Mechanized stabilization of soils of roadbeds. Transp. stroi. 14 no.11:7-8 N '64. (MIRA 18:3)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

LEVANIDOV, I.P., kand.tekhn.nauk; MIKHAYLOV, G.G., inzh.

Hydraulic salting of the Pacific herring; investigation of methods for mechanized salting. Trudy VNIRO 39:72-82 '59. (MIRA 14:6)
(Fish, Salt) (Pacific Ocean—Herring fisheries)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.G.; ESMAN, P.M.

Reconditioning lathe chucks. Stan.i instr. 31 no.2:45 F '60. (MIRA 13:5)
(Chucks)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, Georgiy Georgiyevich; SHIKAN, T.M., red.; BABIL'CHANOVA, G.L., tekhn. red.

[Plastering and painting] Shtukaturnye i maliarnye raboty. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1961. 74 p. (MIRA 15:6)

(Plastering) (Painting, Industrial)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 6934-65 EWT(1)/EEC(t) IJP(c)/BSD/AS(mp)-2/APGC(b)/ASD(a)-5/AFWL/ESD(gs)/
ACCESSION NR: AR4039912 ESD(t) S/0058/64/000/004/D027/D027

52

SOURCE: Ref. zh. Fiz., Abs. 4D193

AUTHORS: Mikhaylov, G. G.; Zagorets, P. A.

TITLE: Effect of temperature on halide absorption spectra

CITED SOURCE: Tr. Mosk. khim. -tekhnol. in-ta im. D. I. Mendeleyeva, vy*p. 41, 1963, 26-28

TOPIC TAGS: halide, absorption spectrum, aqueous solution, thermal coefficient, line shift, bromine ion, chlorine ion, iodine ion

TRANSLATION: A study is made of the effect of temperature on the absorption spectra of aqueous solutions of halides between 25 and 325C, in the spectral region 220-380 nm. With increase in temperature and the electron absorption spectra of the halides shift toward the longer waves, and the thermal coefficient of the shift on the long-wave edge of the absorption spectrum increases, particularly at temperatures above 300C. In the interval 25-325C the mean values of

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 6934-65
ACCESSION NR: AR4039912

the thermal coefficients are (in Joule/mole-deg) 412 for I^-, 384 for Br^-, and 356 for Cl^-. The thermal coefficient of the shift of the maximum of absorption band of the I^- in the 25-2250 region is 174 Joule/mole-deg. Bibliography, 14 titles.

SUB CODE: OP ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. G.

5

20Б8. Problem in investigation of Q-fever and other rickettsioses. Kh. Zh. Zhumatov, G. G. Mikhailov, Z. M. Tyagachina, I. P. Chetuykh, and A. A. Lysenko *Zdravookh. Kazakhstana*, 1955, No. 6, 15—19; *Referat. Zh. Biol.*, 1956, Abstr. No. 76597.—The work was carried out in several regions of the southern and eastern part of Kazakhstan. Sera from 72 patients, admitted to hospital with various diagnoses, were examined and in 22 cases (30.5%) a positive agglutination reaction with *Richettsia burnetii* was found with rising titre during convalescence, on the basis of which the illness was diagnosed as Q-fever. In these same sera complement fixation reactions with antigens of *Richettsia prowazeki*, *R. mooseri*, and *R. conorii*, were carried out. In 3 cases there was observed increase of titre of the complement-fixing antibodies to the antigens of *R. prowazeki* and *R. mooseri*, in 1 case a positive result with leptospirosis antigen. This causes the raising of the problem of investigating the possibility of combined infections of Q-fever and typhus, Q-fever and leptospirosis on the strength of the community of origin of the infection. (Russian)

C. C. Haggard

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.G.; ZHUMATOV, Kh.Zh.

Effect of nonspecific stimuli on the course of an experimental influenza infection. Izv. AN Kazakh.SSR. Ser.fiziol. i med. no.7: 31-38 '56. (MLRA 9:10)
(INFLUENZA)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.G.

Inter-institute conference of the Academy of Medical Sciences of the U.S.S.R. on the problem of influenza. Zdrav. Kazakh. 21 no.10: 73-75 '61. (MIRA 15:2)

(INFLUENZA)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

YERMINOV, I.M.; MIKHAYLOV, G.G.; KOMOMENKO, K.F.

Organization of spare part production at the Osipenko Road Machinery Plant. Stroi. i dor. mashinostr. 3 no. 7:29-31 Jl '58. (MIRA 11:8)

(Osipenko--Road machinery industry)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, O.O.

Using safety appliances. Stroi. i dor.mashinostr. 4 no.2:28 F '59. (MIRA 12:2)
(Safety appliances)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.G.; ESMAN, P.M.

Four-spindle head for milling key grooves. Stroi.i dor. mashinostr. 4 no.9:34 S '59. (MIRA 12:11)
(Milling machines--Attachments)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

5.2200(A)

69666

AUTHORS: Zakharov-Nartsissov, O. I., Mikhaylov, G. G. S/153/60/003/01/010/058
B011/B005

TITLE: Investigation of the Solubility and Composition of Some Carbonate Compounds of Thorium

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol 3, Nr 1, pp 45-48 (USSR)

TEXT: In their paper the authors studied the solubility of $ThOCO_3 \cdot 8H_2O$ in water. It is 41.6 mg/l. In 3 a M solution of $NaClO_4$, it is 46.8 mg/l. The authors indicate various known forms of thorium-carbonate compounds, as well as a diagram of thermal decomposition of $ThOCO_3 \cdot 2H_2O$ from publications. Thorium oxycarbonate is better soluble in aqueous solutions of alkali-metal carbonates than in water, i.e. better than $Th(CO_3)_2$. The solubility increases with increasing CO_3^{2-}-ion concentration. This suggests a formation of soluble complex thorium compounds. Here the chemical composition of the thorium-oxycarbonate precipitate changes. The thorium oxycarbonate used in the experiment was prepared by mixing equivalent amounts of Na_2CO_3 solution with a $Th(NO_3)_4$ solution marked with UX_1. The specific β-activity of the substance obtained was then determined. UX_1 (radioactive thorium isotope) was made of "old" uranium salts (according to G. Siborg, Ref 6). The original

Card 1/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

69666

Investigation of the Solubility and Composition of Some Carbonate Compounds of Thorium

S/153/60/003/01/010/058
B011/B005

$Th(NO_3)_4$ was first purified from the β-active decomposition products of ThB (Pb). The $Th(NO_3)_4$ solution prepared had practically no β-activity. The solubility was determined in Semenov's vessels in a TS-15 thermostat at $20\pm0.05^{\circ}$. Table 1 shows the results, table 2 shows the dependence of the equilibrium content of thorium in aqueous Na_2CO_3 solutions on the concentration of the latter at an ionic strength of 3.0. These data show that the composition of the precipitate is unsteady with increasing equilibrium concentration of the CO_3^{2-} ion from 0 to 0.1 mol/l. At a concentration above 0.1 mol/l, the composition of the precipitate does not change. On the basis of the analysis, one of the following formulas may be assigned to it: $Na_6[Th(CO_3)_5]\cdot 12H_2O$; $Na_4[Th(CO_3)_4]\cdot Na_2CO_3\cdot 12H_2O$; $Na_2[Th(CO_3)_3]\cdot 2Na_2CO_3\cdot 12H_2O$. It may be assumed that in the aqueous Na_2CO_3 solution the same thorium compounds exist as in the precipitate. The last formula is most probable since its coordination number for thorium is 6. The ion solubility product was computed to be

$$C_{ThO^{2+}} \cdot C_{CO_3^{2-}} = 9\cdot 10^{-9}.$$

Card 2/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

Investigation of the Solubility and Composition of Some Carbonate Compounds of Thorium

69666
S/153/60/003/01/010/058
B011/B005

The maximum thorium concentration in the system $ThOCO_3$-Na_2CO_3-$NaClO_4$-H_2O is 15.2 g/l. There are 2 tables and 6 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva; Kafedra khimicheskoy fiziki (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev; Chair of Chemical Physics)

SUBMITTED: January 14, 1959

Card 3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

ZAGORETS, P.A.; MIKHAYLOV, G.G.

Attachment for automatic measurement of absorption spectra on the SF-4 nonrecording spectrophotometer. Prib. i tekh. eksp. 6 no.2: 146-148 Mr-Ap '61. (MIRA 14:9)

1. Moskovskiy khimiko-tekhnologicheskiy institut.
(Spectrophotometer--Attachments)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.G.; KOZHEUROV, V.A.

Mechanism of electric conductivity in wustite. Zhur. fiz. khim. 39 no.3:775-776 Mr '65. (MIRA 18:7)

1. Chelyabinskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

ACC NR: AP6035695 (N) SOURCE CODE: UR/0413/66/000/019/0043/0043

INVENTOR: Vorontsov, Ye. S.; Pashkeyev, I. Yu.; Mikhaylov, G. G.; Shishkov, V. I.

ORG: none

TITLE: Method of copper foil production. Clas. 18, No. 186527 [announced by the Chelyabinsk Polytechnic Institute (Chelyabinskiy politekhnicheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 43

TOPIC TAGS: copper foil, ~~shaped copper foil~~, ~~shaped copper foil production~~ copper, metal foil, sheet metal

ABSTRACT: This Author Certificate introduces a method of copper-foil production. To obtain foil of various thicknesses and configurations without strain hardening, the copper blank is subjected to oxidation at 750—800C for 1—1.5 hr with subsequent reduction of the oxide film in a hydrogen atmosphere at 500—600C for 3—5 min, and separation of cooled foil from the blank.

SUB CODE: 13/ SUBM DATE: 25Jun65/

Card 1/1 UDC: 621.785.33:621.785.34.062-416.002.2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

L 6931-65 EWT(l)/EEC(t) IJP(c)/AFMDC/SSD/AFWL/ESD(ga)/ESD(t) 45
ACCESSION NR: AR4039892 S/0058/64/000/004/A020/A020

SOURCE: Ref. zh. Fiz., Abs. 4A213

AUTHORS: Mikhaylov, G. G.; Zagorets, P. A.

TITLE: Cuvette for spectrophotometric investigation of aqueous solutions at temperatures up to 200°

CITED SOURCE: Tr. Mosk. khim. -tkhnol. in-ta im. D. I. Mendeleyeva, vy*p. 41, 1963, 31

TOPIC TAGS: spectrophotometer, aqueous solution, measuring apparatus

TRANSLATION: An original construction of a hermetic cuvette and a modification of the cuvette compartment of the SF-4 spectrophotometer are proposed, to permit spectrophotometric investigation of aqueous solutions at temperatures up to 200° under a pressure 12-16 atmospheres, at which boiling is impossible.

SUB CODE: OP ENCL: 00

Card 1/1

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. I.

Medicine

Epidemiology of an acute infectious hemorrhagic disease. Moskva, 1947.

Monthly List of Russian Accessions, Library of Congress, June 1952 UNCLASSIFIED

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

LASTOVSKIY, R.P.; MIKHAYLOV, G.I.; NOVIKOVSKAYA, N.A.; PETROV, D.A.; DANSKER, V.L.; MOREVA, Ye.V.; MALKIEL', G.E., red.; PIROZHKOVA, A.I., tekhn. red

[Urea for intravenous injection] Mochevina dlia vnutrivennogo vvedeniia. Moskva, Vses. nauchno-issl. in-t khim. reaktivov i osobo chistykh khimicheskikh veshchestv, 1962. 10 p. (MIRA 16:7)
1. Russia (1923- U.S.S.R.) Sovet Ministrov. Gosudarstvennyy komitet po khimii.

(UREA--THERAPEUTIC USE)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

S/133/60/000/012/001/015
A054/A027

AUTHORS: Karp, S.F., Kobeza, I.I., Mikhaylov, G.I., and Goncharov, I.A.

TITLE: Behavior of Sulfur in Open-Hearth Furnaces Fired by Natural Gas With Self-Carburization

PERIODICAL: Stal', 1960, No. 12, pp. 1075-1078

TEXT: When open-hearth furnaces are fired by natural gas with self-carburization instead of a coke-oven mixture, the composition of the charge, the amount of additions and mainly the behavior of sulfur in the finished metal and during melting as well, will be different. The Zaporozhstal' Plant, in cooperation with the institutes of gas utilization and iron metallurgy of the AN UkrSSR designed schemes to change the firing system of this plant from coke-oven mixture to self-carburizing natural gas (N.N. Dobrokhotov, I.I. Kobeza, K.A. Greben', L.D. Yupko, V.T. Garchenko, and A.L. Turubiner, Stal', 1960, No. 1) and relevant tests were carried out to investigate the changes in the technology resulting from this new system, and especially the behavior of sulfur during melting and in the finished metal, described in the present article. The experiments covered about 200 meltings according to the conventional technology, while some of them (Group I) were carried out in a natural gas-fired furnace

Card 1/6

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

S/133/60/000/012/001/015
A054/A027

Behavior of Sulfur in Open-Hearth Furnaces Fired by Natural Gas With Self-Carburization

and others (Group II) with the usual coke-oven mixture firing. The changes in sulfur content in various stages of the process and in the finished metal were plotted in frequency graphs. During the tests low carbon rimming and killed steels (mainly 08кп = 08kp, ВГВ = VGV, 08ГВ = 0VGV, Ст.3сп = St.3sp, 10кп = 10kp, 1кп = 1kp, 2кп = 2kp, 08кпж = 08kpzh, 08ю = 08yu, Ст 3спд = St.3spd, Ст. 4сп = St.4sp etc) were produced, partly by bottom casting, partly by top casting. In the natural gas-firing process the air was enriched by oxygen to about the same degree as when firing with coke-oven mixture. The S-content in the finished metal was found to have decreased, on an average, in the Group I tests to as little as 0.0208%, as compared with the 0.027% S-content of the metals of Group II. The graphs also show that the main part of Group I melts (72%) contains not more than 0.016-0.024 S, whereas the main part of Group II melts contains 0.025-0.030%. In other words: the degree of desulfuration in Group I-metals is 43.8%, whereas the percentage for Group II is 23.4, i.e., 20% lower. The decrease in S-content in the finished metal, in Group I tests, is not accompanied by structural changes in the metal. Another remarkable feature of the change in S-content of the

Card 2/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

S/133/60/000/012/001/015
A054/A027

Behavior of Sulfur in Open-Hearth Furnaces Fired by Natural Gas With Self-Carburization

metal in the new firing system is that the removal of sulfur is more uniform, it takes place during the entire melting period. Of the total amount of S (0.0162%) removed from the metal, 0.0060% is separated during the first half of the melting process and 0.0102% during its second half, in the Group I melts. When firing with coke-oven mixture, however, 0.0082% S is removed during melting and from this amount only 0.0010% during the first half of the process and 0.0072% during the second. This uniform S-removal from the metal during the Group I meltings is explained by the favorable constant atmosphere of the furnace due to natural gas firing. With regard to temperature it was found that on account of the metal fluidizing more intensively before oxidation its temperature in Group I is about 10-15°C lower than in Group II. With regard to melting time it was established that when firing with self-carburizing natural gas and increasing specific oxygen consumption by 7-8%, the melting time could be shortened by about 1 hour compared with coke-oven mixture firing. The Group I meltings were carried out at the end of the furnace campaign, i.e., under less favorable conditions than those of Group II. Thus, the better

Card 3/6

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

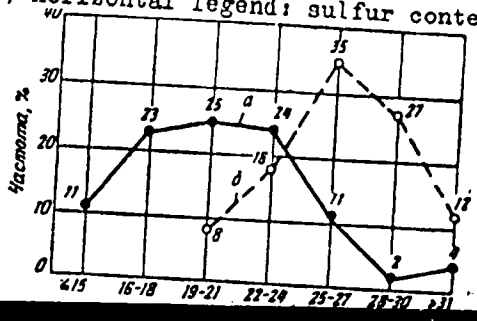
S/133/60/000/012/001/015
A054/A027

Behavior of Sulfur in Open-Hearth Furnaces Fired by Natural Gas With Self-Carburization

results obtained as regards S-removal from the metal in a natural gas-fired furnace show that in this firing system ageing of the furnace is delayed. There are 6 figures, 2 tables and 1 Soviet reference.

ASSOCIATION: Institut chernoy metallurgii AN USSR (Institute of Iron Metallurgy of the AN UkrSSR) Zavod "Zaporozhstal'" (Zaporozhstal' Plant).

Legend to Figure 1: Frequency curves of the S-content in the finished metal, made in a furnace fired by natural gas with self-carburization (a) and with coke-oven mixture (b). The number above the point means the amount of meltings. Vertical legend: frequency, %; horizontal legend: sulfur content of the finished metal, 10^{-3}%.



Card 4/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

Assembly-Line Methods

Organization of the use of tools in shops with continuous production lines. Sel'khozmashina, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, UNCLASSIFIED.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, Gennadiy Ivanovich; SUSLOVA, Zinaida Flegontovna; SHAVKIN, G.B., inzhener, redaktor; KHITROV, P.A., tekhnicheskiy redaktor

[Handbook on the transportation of merchandise in containers] Spravochnik po perevozkam gruzovvkonteinerakh. Moskva, Gos. transp. zhel-dor. izd-vo, 1955. 198 p. (MLRA 8:6)
(Packing for shipment)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, N. I.

Lumbering

Improving operation of the timber-rafting fleet. L. s. rom. 12 no. 7, 19 .

9. Monthly List of Russian Accessions, Library of Congress, September 1953, Uncl.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

Principles of mercury barometer design. [Trudy] LO NTO Priborprom. Sekt. gidromet. i geofiz. prib. no.1:92-128 '57. (MIRA 11:6)
(Barometer)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I., kand. tekhn. nauk, dots., nauchn. red.;
KUZMICHENKO, G.A., red.

[Problems of freight operation in railroad transportation] Voprosy gruzovoi raboty na zheleznodorozhnom transporte. Minsk, Izd-vo vysshego, srednego spetsial'nogo i profes. obrazovaniia BSSR, 1963. 91 p. (MIRA 17:4)

1. Gomel'. Belorusskiy institut inzhenerov zheleznodorozhnogo transporta.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I., inzh.

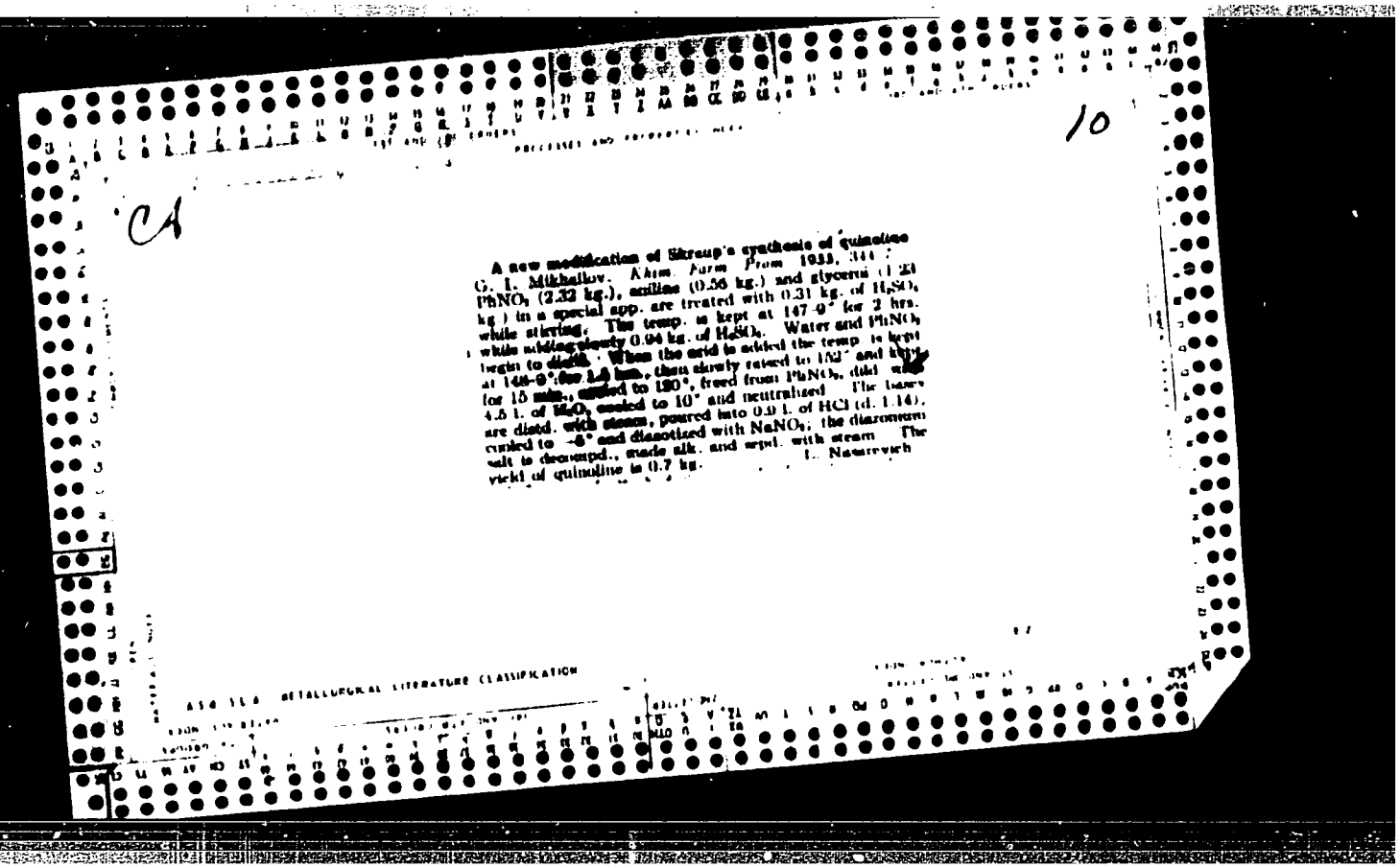
Water-heating [illegible] for solid fuel in the system of the Ural Trust for the Design, Planning, Assembly and Adjustment of Power Installations and Control and Measuring Instruments of the Ministry of Ferrous Metallurgy of the U.S.S.R. Nov. tekh. zhil.-kom. khoz. Bibl. ukazatel' [publication info illegible] '64.

(MIRA 18:1)

1. Uralenergochermet.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



CA

10

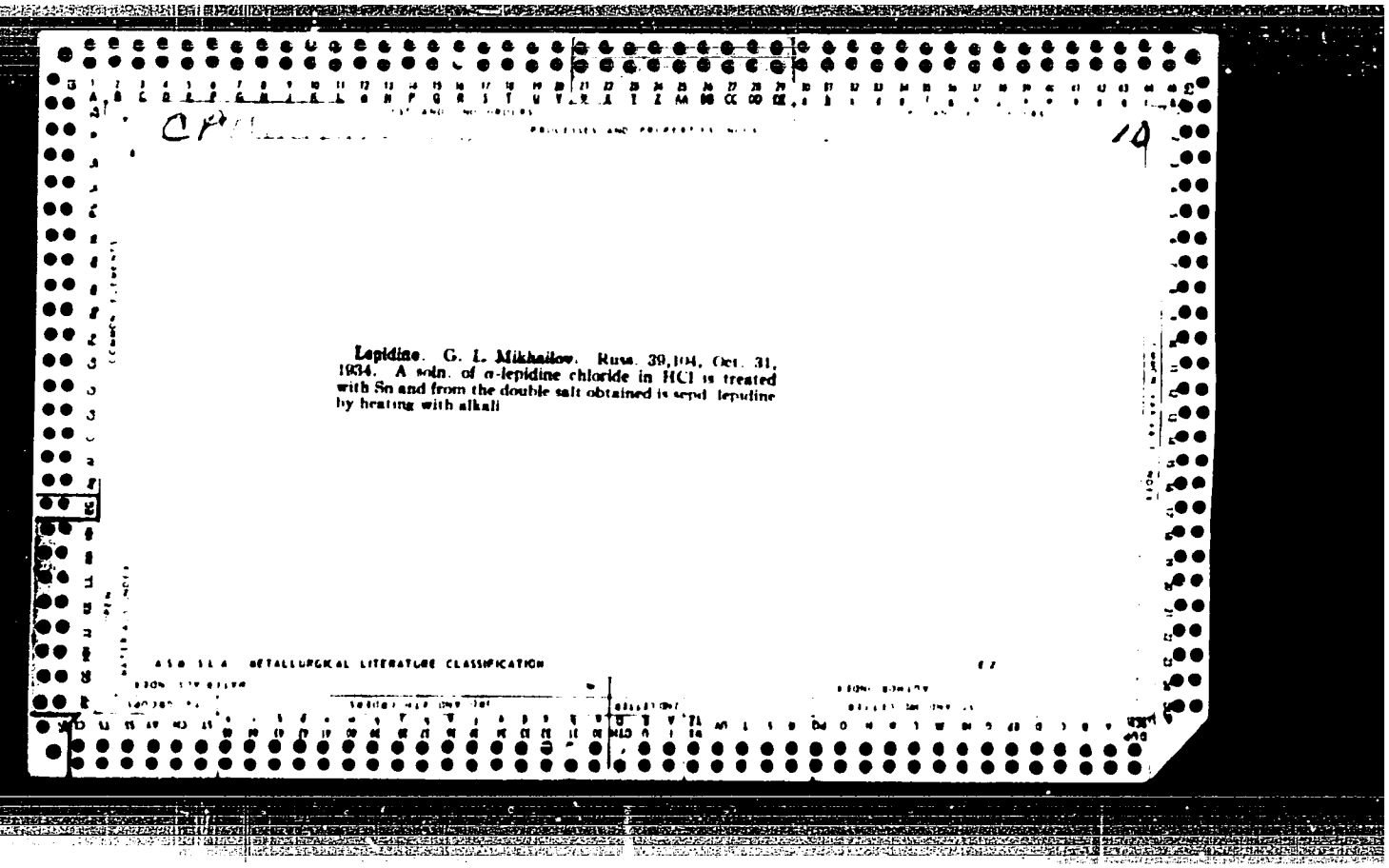
A new modification of Skraup's synthesis of quinoline
G. I. Mikhailov. *Khim. Farm. Prom.* 1933, 344.
$PhNO_2$ (2.32 kg.), aniline (0.56 kg.) and glycerin (1.21 kg.) in a special app. are treated with 0.31 kg. of H_2SO_4 while stirring. The temp. is kept at 147-9° for 2 hrs. while adding slowly 0.94 kg. of H_2SO_4. Water and $PhNO_2$ begin to distill. When the acid is added the temp. is kept at 148-9°, for 1.5 hrs., then slowly raised to 152° and kept for 15 min., cooled to 130°, freed from $PhNO_2$, dild. with 4.5 l. of H_2O, cooled to 10° and neutralized. The tars are distd. with steam, poured into 0.9 l. of HCl (d. 1.14), cooled to -8° and diazotized with $NaNO_2$; the diazonium salt is decomposed, made alk. and sepd. with steam. The yield of quinoline is 0.7 kg.

I. Nasarevich

A54 Y6 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

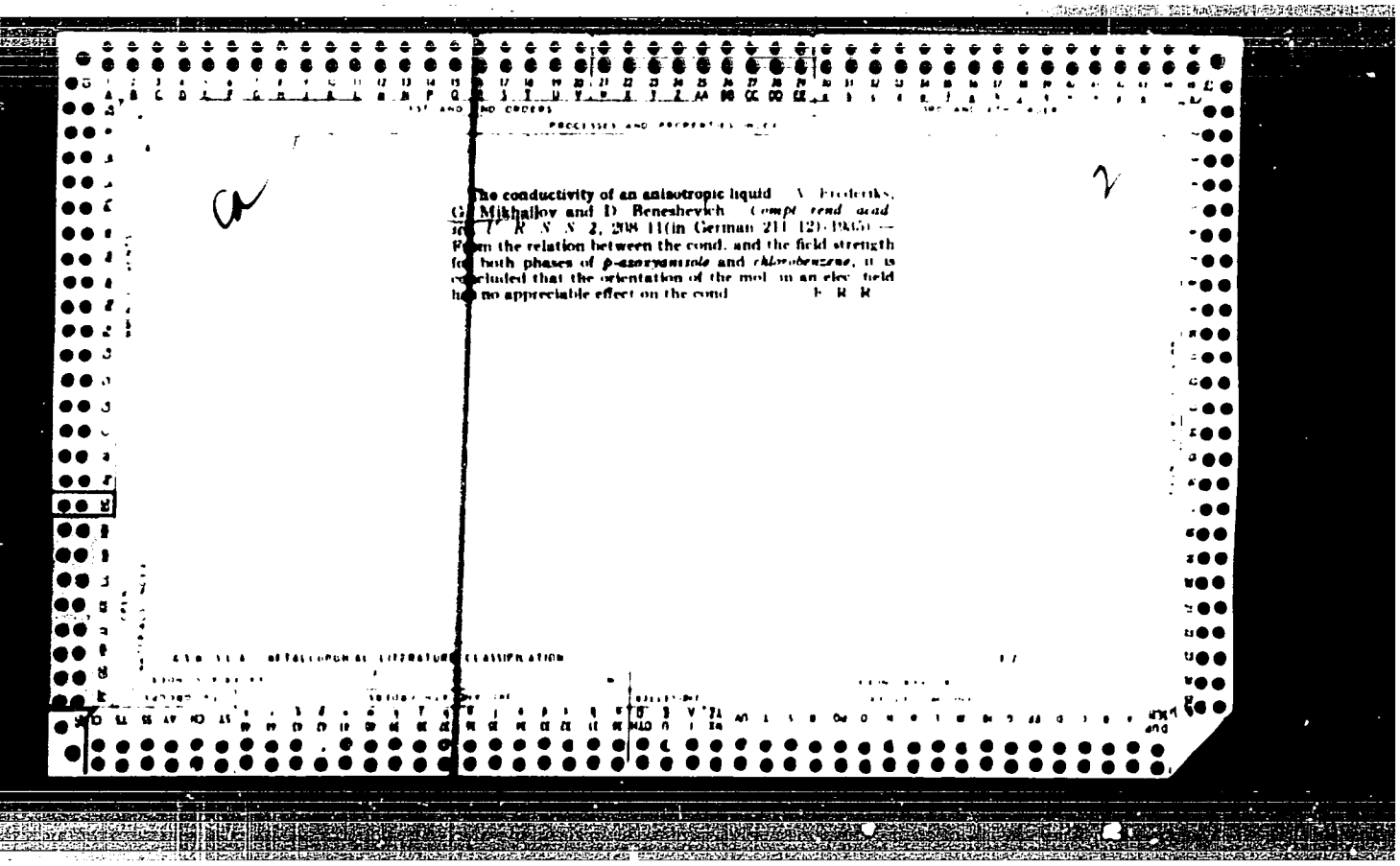


Lepidine. G. L. Mikhailov. Russ. 39,104, Oct. 31, 1934. A soln. of α-lepidine chloride in HCl is treated with Sn and from the double salt obtained is sepd lepidine by heating with alkali

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

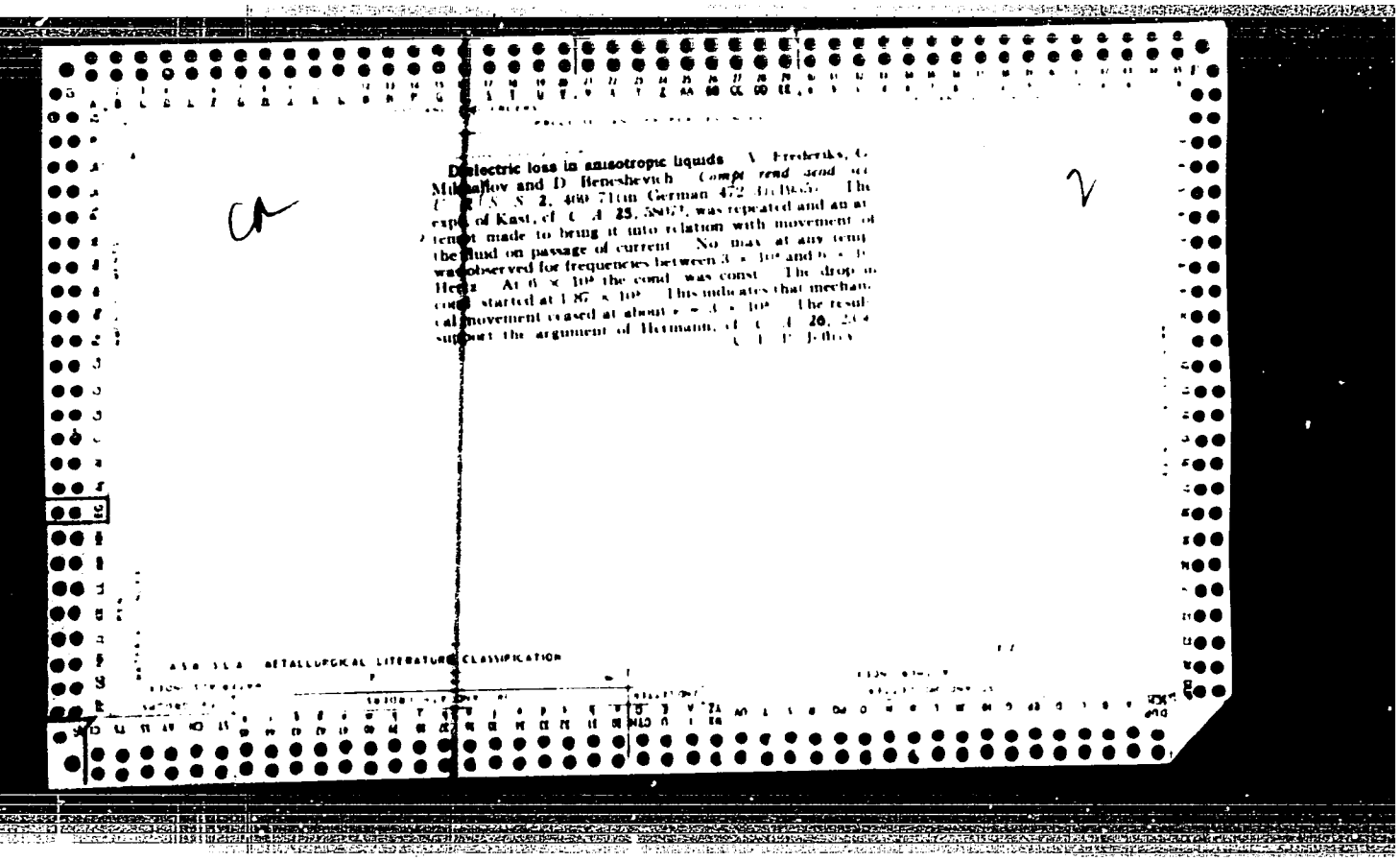
"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



The conductivity of an anisotropic liquid V Frederiks, G Mikhailov and D Beneshevich *Compt rend acad* [illegible] *R S S* 2, 208 11(in German 211 12)-1935) — From the relation between the cond. and the field strength for both phases of *p-azoxyanisole* and *chlorobenzene*, it is concluded that the orientation of the mol in an elec field has no appreciable effect on the cond E R R

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

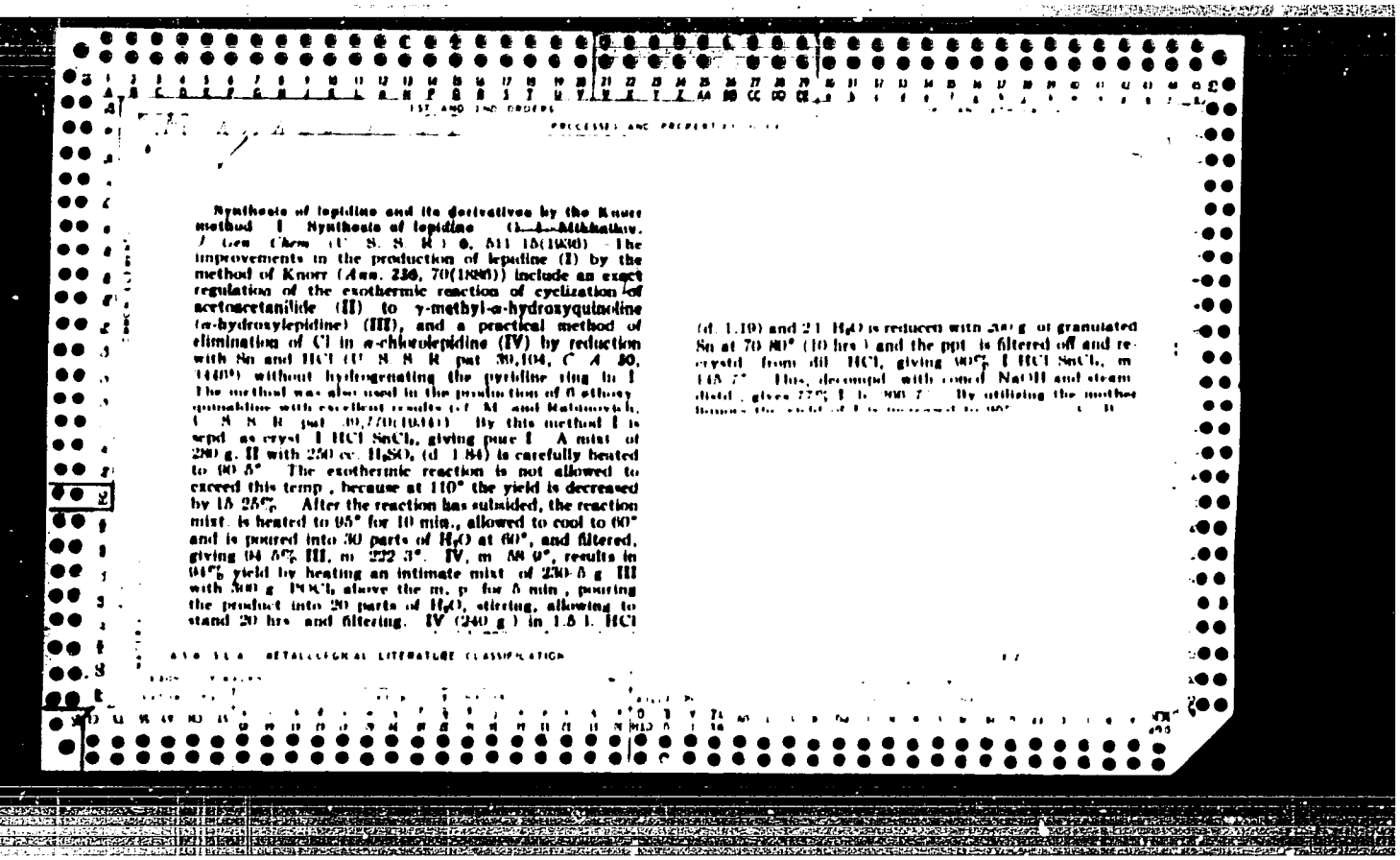


Dielectric loss in anisotropic liquids V Frederiks, [illegible] Mikhailov and D Beneshevich *Compt rend Acad sci* [illegible] *USSR* **2**, 400-7 (in German) 472 [illegible] The exptl of Kast, cf *C A* **25**, 5807, was repeated and an attempt made to bring it into relation with movement of the fluid on passage of current No max at any temp was observed for frequencies between 3 × 10⁵ and 6 × 10⁵ Hertz At 6 × 10⁵ the cond was const The drop in cond started at 1.87 × 10⁵ This indicates that mechanical movement ceased at about [illegible] The results support the argument of Hermann, cf *C A* **20**, 2264 [illegible]

A58 51A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

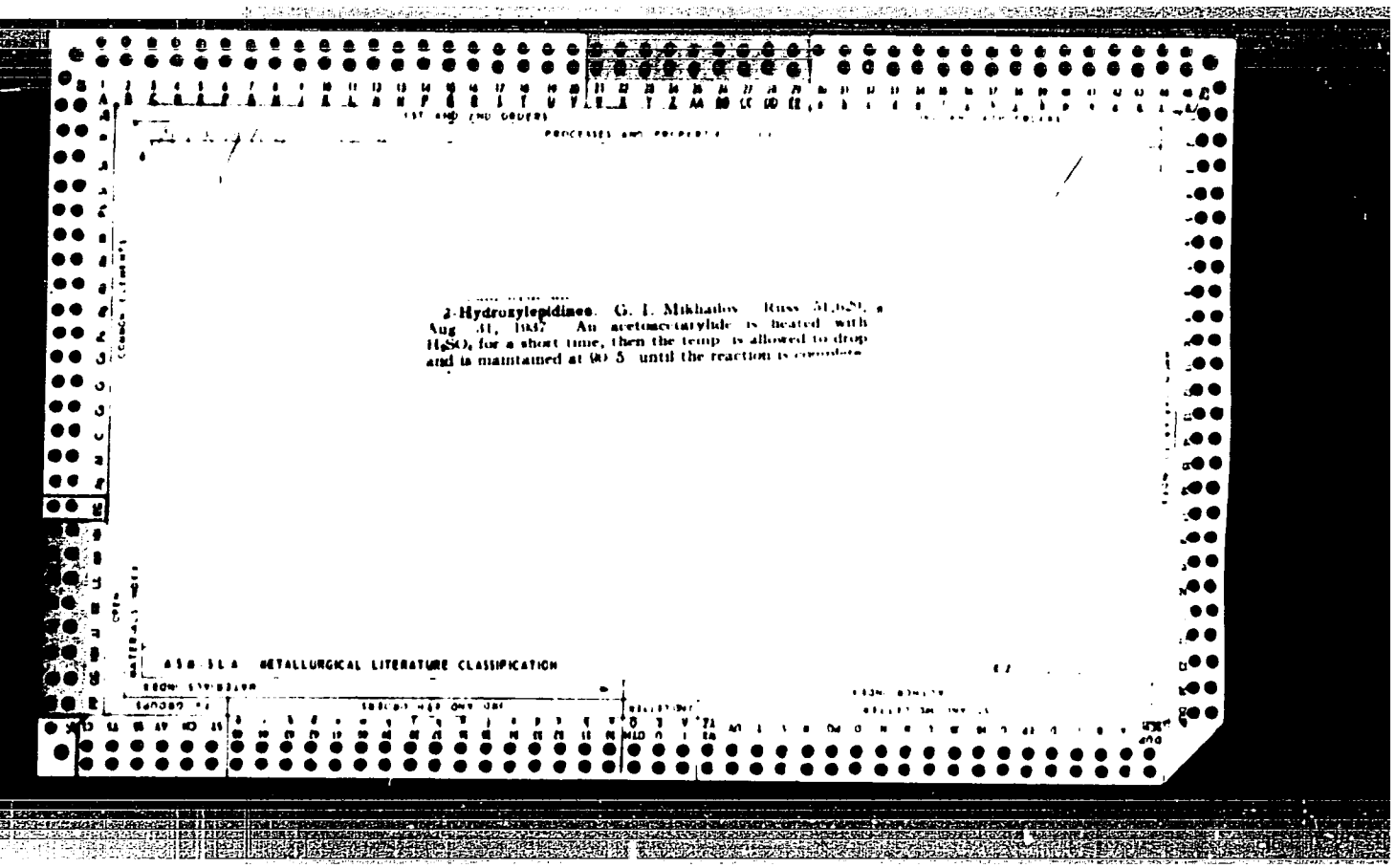


Synthesis of lepidine and its derivatives by the Knorr method. I. Synthesis of lepidine. (I. A. Alikhanov. *J. Gen. Chem. (U. S. S. R.)* 6, 511-15(1936).—The improvements in the production of lepidine (I) by the method of Knorr (*Ann.* 236, 70(1886)) include an exact regulation of the exothermic reaction of cyclization of acetoacetanilide (II) to γ-methyl-α-hydroxyquinoline (α-hydroxylepidine) (III), and a practical method of elimination of Cl in α-chlorolepidine (IV) by reduction with Sn and HCl (U. S. S. R. pat. 30,104, *C. A.* 30, 1449) without hydrogenating the pyridine ring in I. The method was also used in the production of 6-ethoxy-quinaldine with excellent results (cf. M. and Matsimovich, U. S. S. R. pat. 30,770(1934)). By this method I is sepd. as cryst. I·HCl·SnCl$_2$, giving pure I. A mixt. of 280 g. II with 250 cc. H_2SO_4 (d. 1.84) is carefully heated to 90.5°. The exothermic reaction is not allowed to exceed this temp., because at 110° the yield is decreased by 15-25%. After the reaction has subsided, the reaction mixt. is heated to 95° for 10 min., allowed to cool to 60° and is poured into 30 parts of H_2O at 60°, and filtered, giving 94.5% III, m. 222.3°. IV, m. 58.9°, results in 94% yield by heating an intimate mixt. of 230.5 g. III with 300 g. PCl_5, above the m. p. for 5 min., pouring the product into 20 parts of H_2O, stirring, allowing to stand 20 hrs. and filtering. IV (240 g.) in 1.5 l. HCl (d. 1.19) and 2 l. H_2O is reduced with 500 g. of granulated Sn at 70-80° (10 hrs.) and the ppt. is filtered off and recrystd. from dil. HCl, giving 80% I·HCl·SnCl$_2$, m. 145.7°. This, decompd. with concd. NaOH and steam distd., gives 77% I, b. 239.7°. By utilizing the mother [illegible]

A.V.S. U.S.A. METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

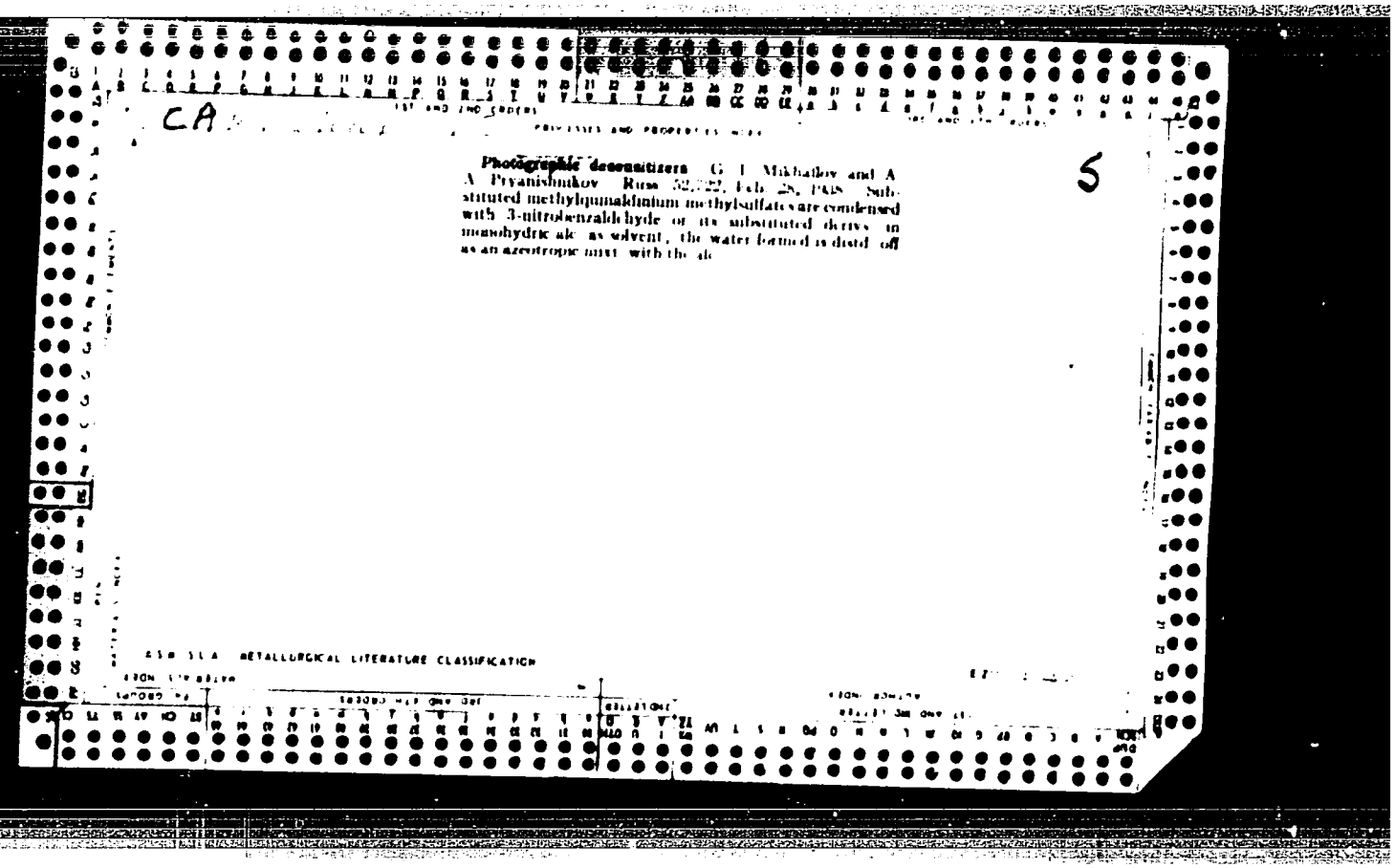


3-Hydroxylepidines. G. I. Mikhailov. Russ 51,685, 8 Aug 41, 1937. An acetonecrotylide is heated with H_2SO_4 for a short time, then the temp is allowed to drop and is maintained at 60-5 until the reaction is complete.

ASB DLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



CA

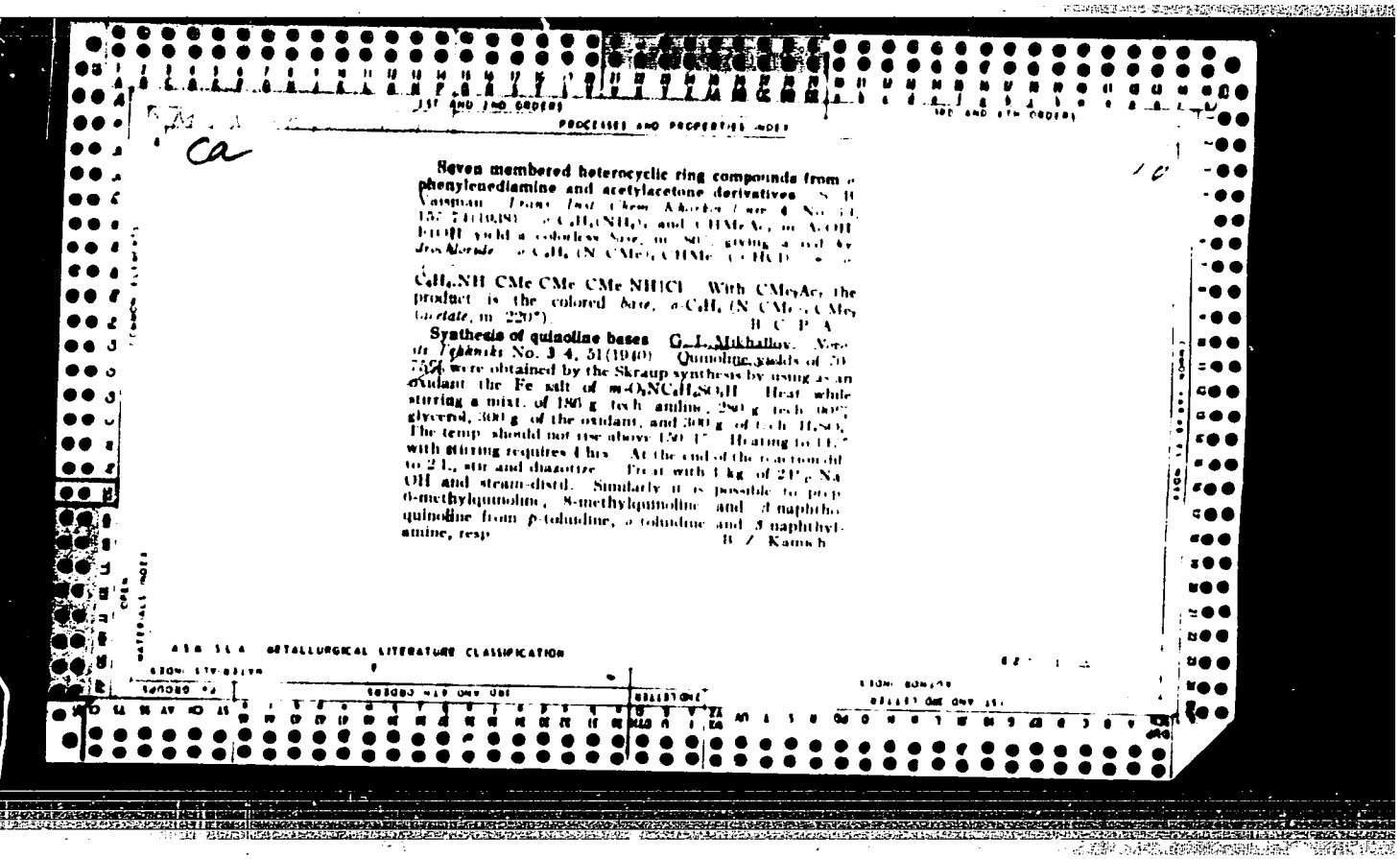
5

Photographic desensitizers. G. I. Mikhailov and A. A. Pryanishnikov. Russ. 52,722, Feb. 28, 1938. Substituted methylquinaldinium methylsulfates are condensed with 3-nitrobenzaldehyde or its substituted derivs. in monohydric alc. as solvent, the water formed is distd. off as an azeotropic mixt. with the alc.

A1m 11 A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

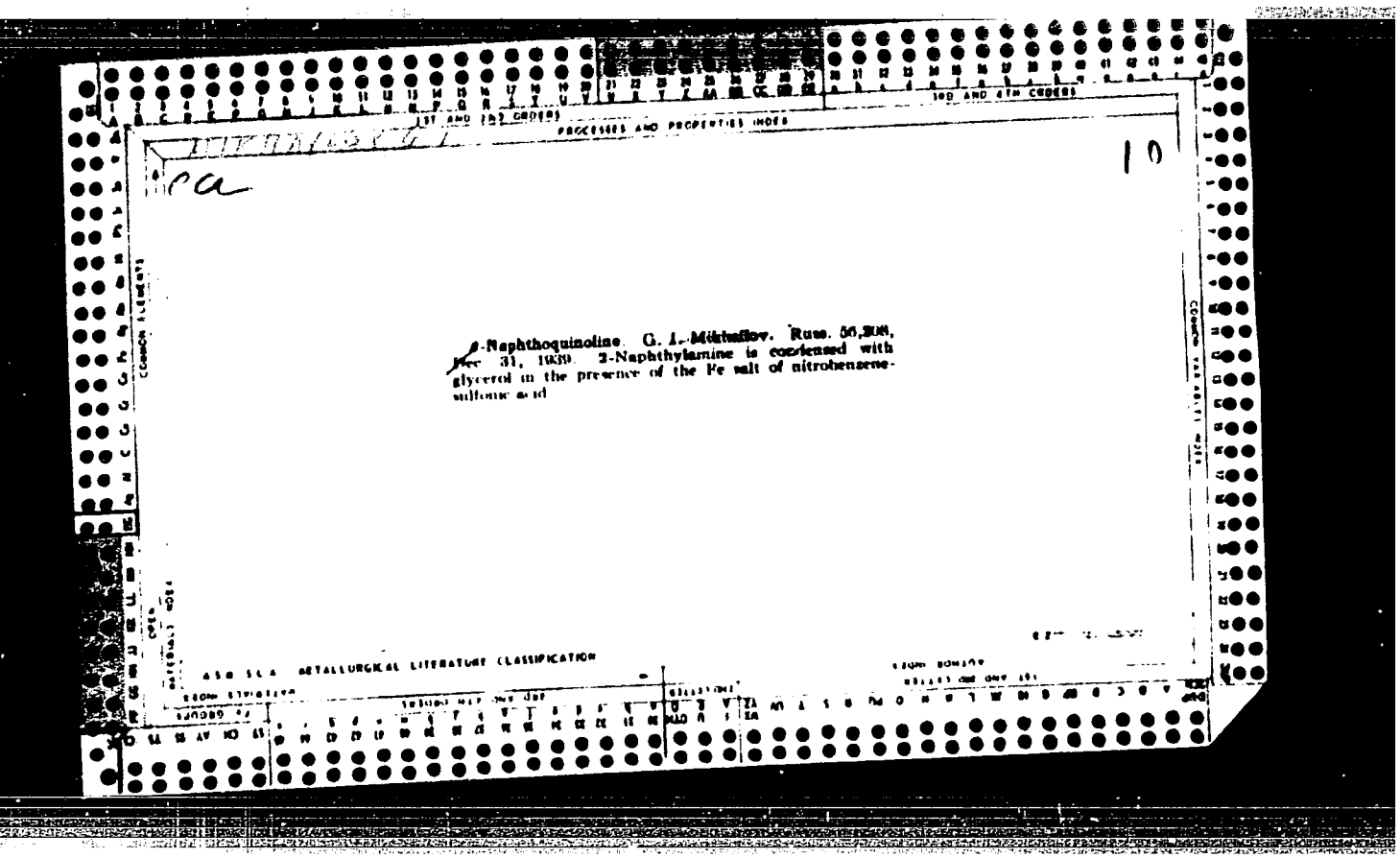


Seven membered heterocyclic ring compounds from *o*-phenylenediamine and acetylacetone derivatives S. H. Vartanyan *Trans. Inst. Chem. Technol. Ivan.* 4 No. 1, 157-74 (1949). *o*-$C_6H_4(NH_2)_2$ and $CHMeAc_2$ in AcOH + HCl yield a colorless Sn salt, m. 301°, giving a red *hydrochloride* of $C_6H_4(N{:}CMe)_2CHMe$ (+HCl). The product is the colored *base*, *o*-$C_6H_4(N{:}CMe)_2CMe$ (*acetate*, m. 220°). B C P A

Synthesis of quinoline bases G. I. Mikhailov. *Nauch. Zapiski* No. 3 4, 51(1940). Quinoline yields of 50-75% were obtained by the Skraup synthesis by using as an oxidant the Fe salt of *m*-$O_2NC_6H_4SO_3H$. Heat while stirring a mixt. of 186 g. tech. aniline, 280 g. tech. 96% glycerol, 300 g. of the oxidant, and 300 g. of tech. H_2SO_4. The temp. should not rise above 120°. Heating to 115° with stirring requires 4 hrs. At the end of the reaction dil. to 2 l., stir and diazotize. Treat with 1 kg. of 20% NaOH and steam-distil. Similarly it is possible to prep. 6-methylquinoline, 8-methylquinoline and β-naphthoquinoline from *p*-toluidine, *o*-toluidine and β-naphthylamine, resp. B. Kamash

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

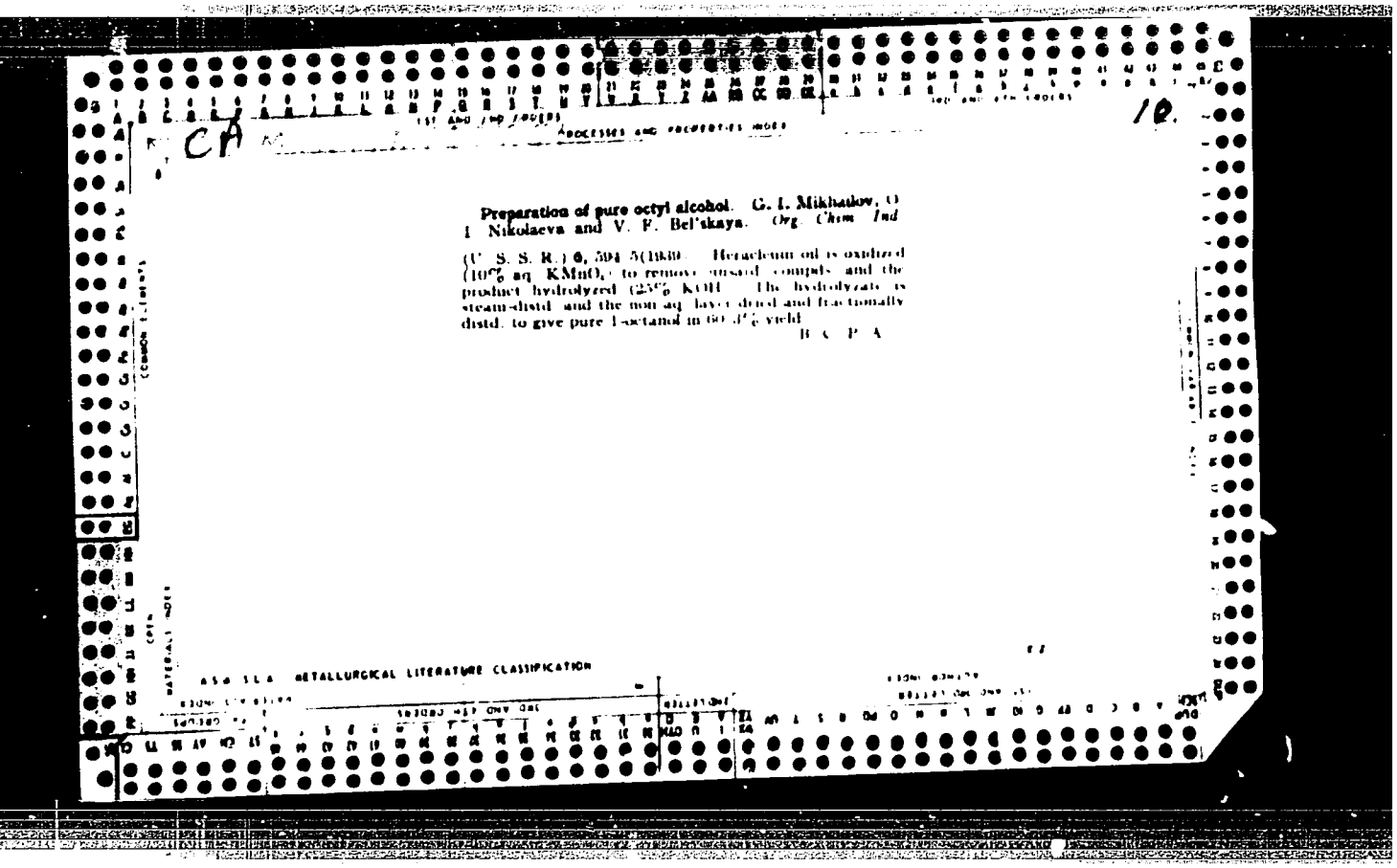
"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



β-Naphthoquinoline. G. I. Mikhailov. Russ. 56,308, Dec. 31, 1939. 2-Naphthylamine is condensed with glycerol in the presence of the Fe salt of nitrobenzenesulfonic acid

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



CA

10.

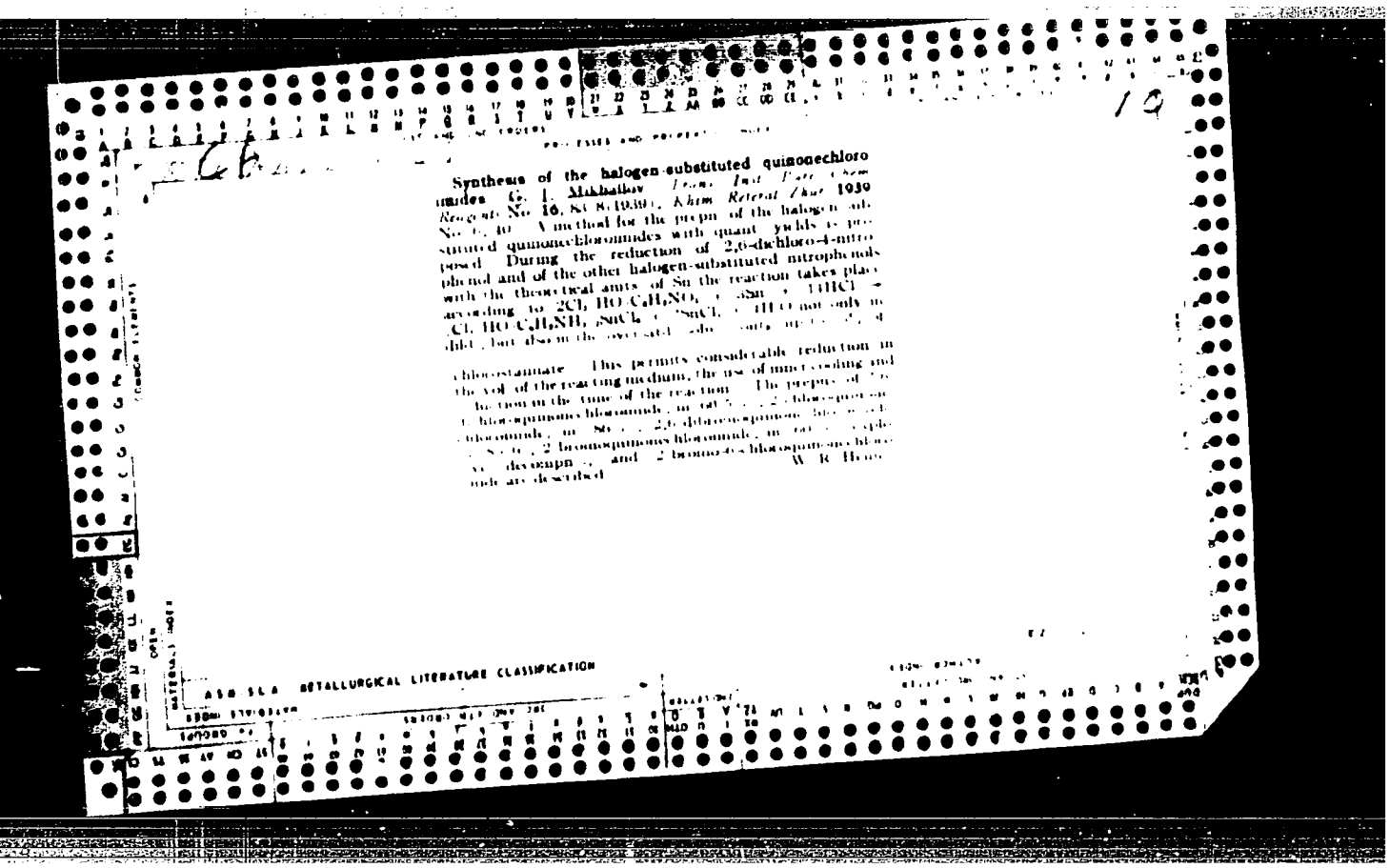
Preparation of pure octyl alcohol. G. I. Mikhailov, O. I. Nikolaeva and V. F. Bel'skaya. *Org. Chem. Ind.* (U. S. S. R.) **6**, 594-5(1939). Hexadecane oil is oxidized (10% aq. $KMnO_4$) to remove unsatd. compds. and the product hydrolyzed (25% KOH). The hydrolyzate is steam-distd. and the non-aq. layer dried and fractionally distd. to give pure 1-octanol in 60-4% yield.

B. C. P. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

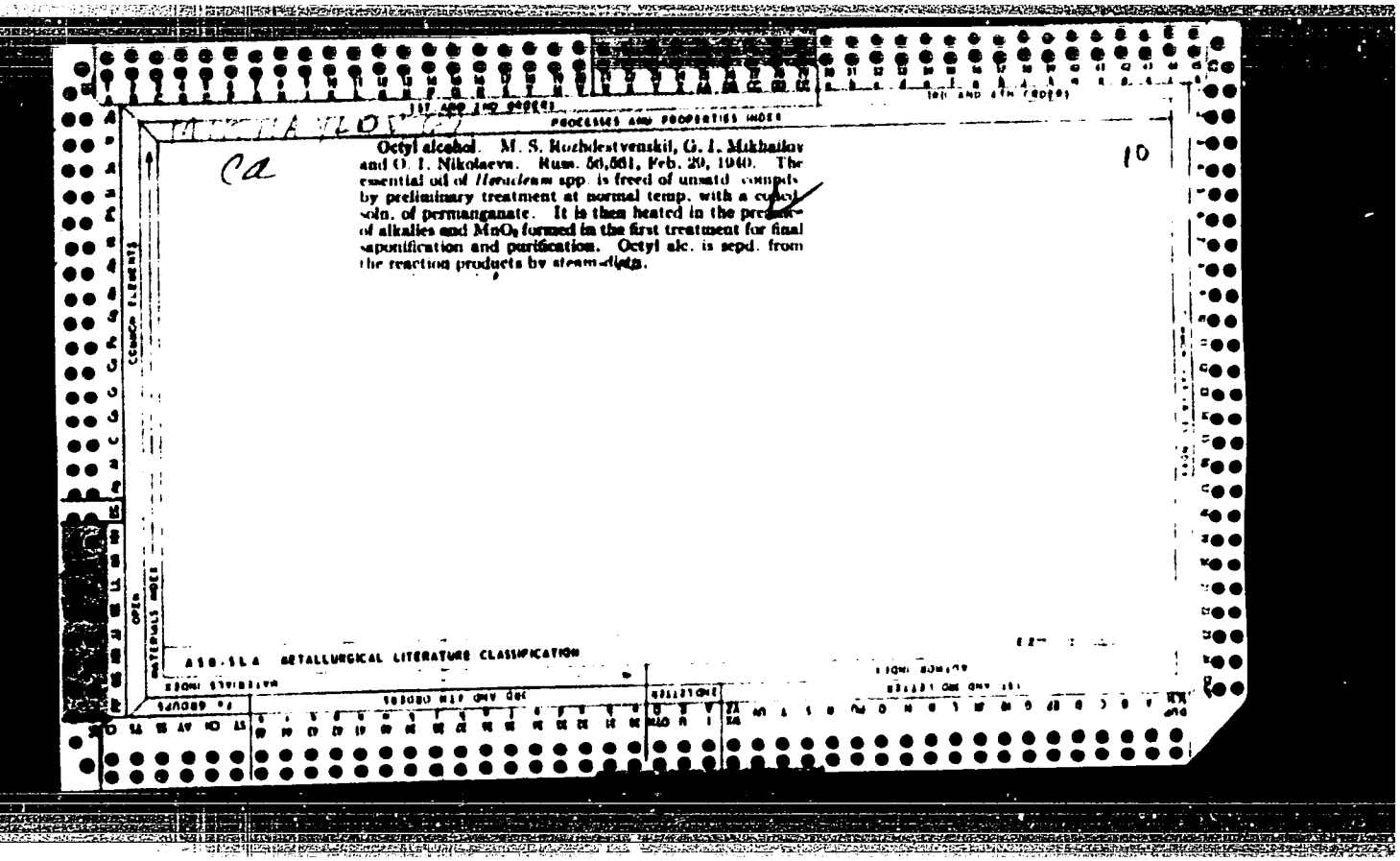


Synthesis of the halogen-substituted quinonechloro imides G. L. Mikhailov *Trans. Inst. Pure Chem. Reagents* No 16, 80-8(1939). *Khim. Referat. Zhur.* 1939 No 6, 10. A method for the prepn of the halogen-substituted quinonechloroimides with quant. yields is proposed. During the reduction of 2,6-dichloro-4-nitrophenol and of the other halogen-substituted nitrophenols with the theoretical amts. of Sn the reaction takes place according to $2Cl, HO\cdot C_6H_2NO_2 + 6Sn + 14HCl \rightarrow Cl, HO\cdot C_6H_2NH_2, 2SnCl_4 + SnCl_2 + 4H_2O$ not only in dil., but also in the concd. solns. This permits considerable reduction in the chlorostannate. This permits considerable reduction in the vol. of the reacting medium, the use of more concd. and hot solns. in the time of the reaction. The prepns. of 2-bromo-4-quinonechloroimide, m. 240°, 2-bromo-6-chloro-4-quinonechloroimide, m. 265°, 2,6-dibromo-4-quinonechloroimide, m. 265°, 2-bromo-6-chloro-4-benzoquinonechloroimide, m. 220°, 2,6-dibromo-4-benzoquinonechloroimide, m. 220° and 2-bromo-6-chloro-4-benzoquinonechloroimide, m. 220° are described. W. R. Henn

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



Ca

10

Octyl alcohol. M. S. Rozhdestvenskii, G. I. Mikhailov and O. I. Nikolaeva. Russ. 56,561, Feb. 29, 1940. The essential oil of *Heracleum* spp. is freed of unsatd. compds. by preliminary treatment at normal temp. with a cold soln. of permanganate. It is then heated in the presence of alkalies and MnO_2 formed in the first treatment for final saponification and purification. Octyl alc. is sepd. from the reaction products by steam-distn.

A50-SL4 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. I. Cand. Chem. Sci.

Dissertation: "Research on the Synthesis of Elpidine and its Derivatives using Knorr's Oxyquinoline Method." Moscow Order of Lenin State U imeni M. V. Lomonosov, 26 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

KUZNETSOV, V.I., doktor khimicheskikh nauk; GLOBUS, R.L.; KARSKAYA, T.N.; MIKHAYLOV, G.I.; PEVTSOV, G.A.; PYATNITSKAYA, G.N.; ROZHDESTVENSKIY, M.S. [deceased]; SOKOLOV, N.I.

[Chemical reagents and preparations] Khimicheskie reaktivy i preparaty; spravochnik. Sostaviteli V.I.Kuznetsov [i dr.] Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1953. 668 p. (MLRA 7:4)
(Chemical tests and reagents)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G. I.

Synthesis of tetrabutylammonium iodide. G. I. Mikhailov. *J. Appl. Chem. U.S.S.R.* [illegible] (translation).—See *C.A.* 49, 3786*i*. [0541] Engl. H. L. H.

CH

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

USSR.

Synthesis of tetrabutylammonium iodide. G. I. Mikhailov. *Zhur. Prikład. Khim.* 27, 217-19(1954).—In the prepn. of Bu_4NI at 140-70° the reaction time is reduced to 2 hrs.; excess BuI (50%) gives 84-90% crude or 68-70% pure product. Refluxing 93 g. Bu_3N and 138 g. BuI 2 hrs. (final b.p. 170-3°) gave a homogeneous soln., boiled 0.5 hr. longer and poured into a dish, allowed to solidify, and washed with petr. ether, yielded 86-90% crude Bu_4NI, m. 115-25°. Crystn. from 10 parts H_2O gave 68-70% pure product, m. 142-3°. G. M. Kosolapoff

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

2-Bromopyridine. G. I. Mikhailov. *J. Appl. Chem. U.S.S.R.* 27, 331–4(1954)(Engl. translation).—See *C.A.* 49, 3001e. H. L. H.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

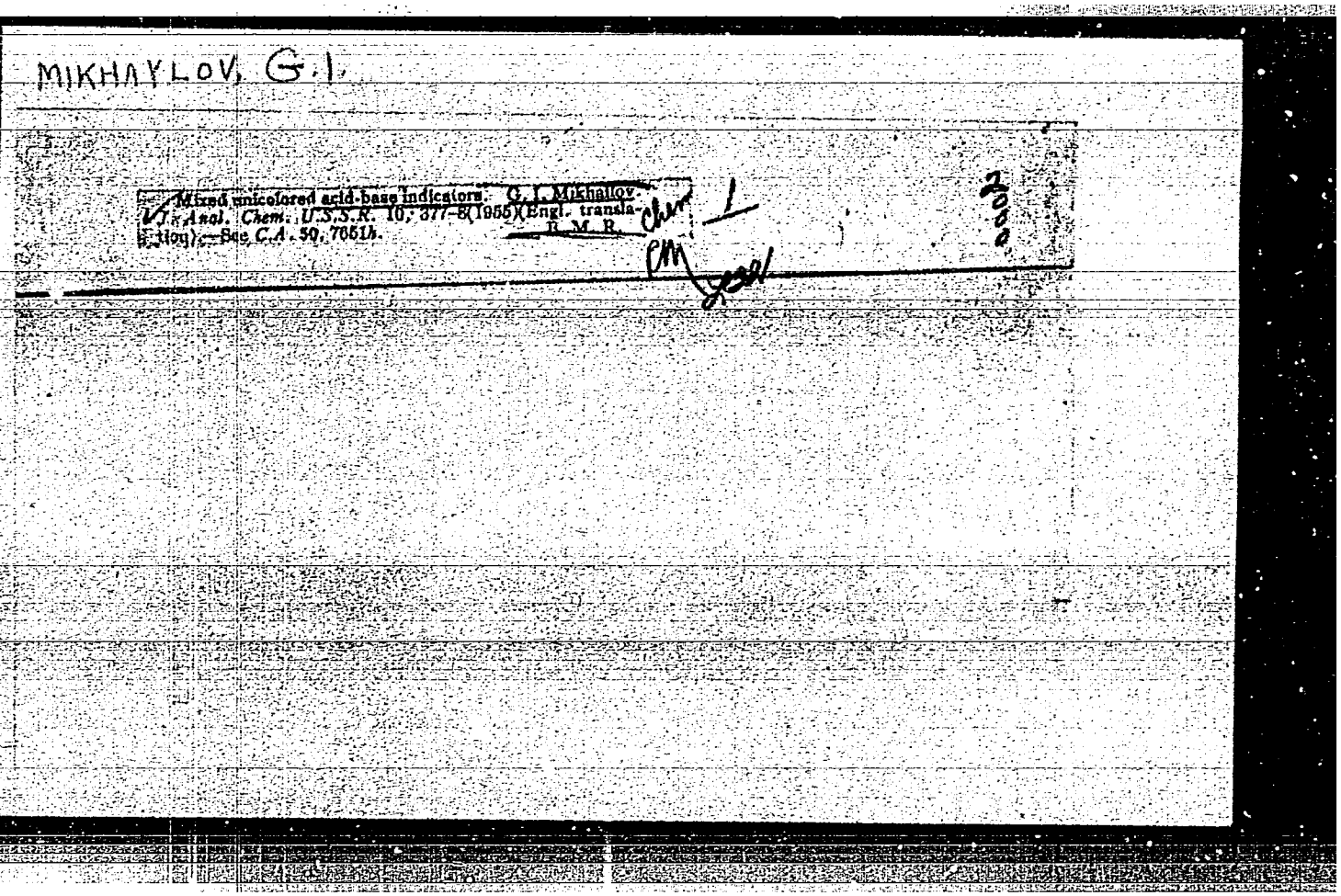
USSR.

2-Bromopyridine. G. I. Mikhailov. *Zhur. Prikład. Khim.* 27, 849-51(1954).—An improved procedure for prepn. of 2-bromopyridine is described. To 1.4 l. 43% HBr is added at 5° 480 g. 2-aminopyridine, the mixt. cooled to −5°, and treated at below −2° with 530 ml. Br to yield a suspension of the perbromide; 700 ml. concd. HCl is then added at below −2°, the mixt. is cooled to −5° and diazotized with 770 g. $NaNO_2$ in 1.2 l. H_2O; evolution of N occurs simultaneously with the diazotization. The mixt. is stirred 0.5 hr. at −5°, treated with about 1.7 l. 40% NaOH (until alk. to phenolphthalein) at below 20–5°, and the crude product is steam distd., yielding 650–70 g. crude product; some 20–5 g. can be recovered by extn. from the aq. distillate, for a total yield of 85–7%. This product retains some 2,5-dibromopyridine (d_{20} 1.633–1.635). It is fractionated, and the pure product, bp 92.5–3.0°, is collected. Redistn. gave the final product, bp 93.4–3.7°, d_4^{20} 1.6337, n_D^{20} 1.5712. No 2-chloropyridine is formed in this procedure.

G. M. Kosolapoff

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4



MIKHAYLOV, G. I.

Mixed unicolored acid-base indicators. G. I. Mikhailov. Zavodskaya Lab. 22, 1000 (1956). Zh. Anal. Khim., U.S.S.R. 10, 377-8(1955)(Engl. translation); Bge, C.A. 50, 7661h.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

1968. Mixed one-colour acid - alkali indicators. G. I. Mikhailov (Sci. Res. Inst. of Chem. Reagents, Moscow). *Zhur. Anal. Khim.*, 1968, 18 (6), 183–185.—By the mixture of two suitably chosen one-colour acid - alkali indicators it is possible to obtain an indicator showing a colourless pH range between two coloured ranges. Thus when 0·1 per cent. alcoholic soln. of hexamethoxytriphenylmethanol and thymolphthalein are mixed in equal amounts the mixed indicator is red from pH 0 to 4·6, colourless from pH 4·6 to 9·3, and blue from pH 9·3 to 14. Various other examples are given. G. S. Smith

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

Monochromatic acid-base indicators. Zav.lab. 21 no.2:156-162 '55. (MLRA 8:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov.
(Indicators and testpapers)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

USSR

Preparation of 2,2'-bipyridyl from 2-bromopyridine. G.I. Mikhailov. *Zhur. Prikład. Khim.* 28, 114-15(1955).—An improved Ullmann reaction is attained when the Cu powder is mixed with NaCl. Thus, to refluxing mixt. of 150 ml. cymene, 60 g. powd. Cu and 75 g. NaCl was added over 0.5 hr. 79 g. 2-bromopyridine and the mixt. refluxed gently 1.5 hrs. After cooling to 60° it was treated with 150 ml. 1:1 HCl and heated until the mass changed to a powder; steam distn. of the solvent, treatment of the residue with excess NaOH and further steam distn., followed by extn. of the distillate with $CHCl_3$ gave 60-2% 2,2'-bipyridyl, m. 67-9° (from ligroine). G. M. Kosolapoff

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4

MIKHAYLOV, G.I.

m-Cresolsulfonephthalein-m-cresol purple. G. S. Kirsha-
lova and G. I. Mikhailov. U.S.S.R. 104,125, Oct. 25,
1956. Addn. to U.S.S.R. 86,680. To increase the yield
a mixt. of POCl$_3$ and ZnCl$_2$ is used as a condensing agent.
The procedure is also used for the production of xylenol-
sulfonephthalein-xylenol blue and carvacrolsulfonephthalein-
carvacrol blue. M. Hirsch

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001034010008-4"